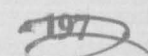


(1) Number of pages 36.
(2) Date of repair Feb 87
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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS DEPARTMENT

G.O. No.	2954-55-W	Press.
B.P. No.		Mis.
Dated	25-11-1987	

Not to be folded or roughly handled



2954
GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

25th November 1881, No. 2954 W.

Buildings and Roads.
Civil Works.

Read again:—

No. 118. From Colonel W. S. TREVOR, R.E., Officiating Secretary to the Government of India, Public Works Department (Account—General), to the Secretary to the Government of Madras, Public Works Department, dated Simla, 22nd October 1881, No. 379 A.G.

I AM directed to request that you will furnish the Government of India at a very early date with a special report on the present state of the Harbour Works, the sufficiency of the grant already assigned for the work for the current year, and the probable amount, if any, that will be needed next year.

No. 118-A. From W. PARKES, Esq., M. Inst. C.E., Engineer-in-Chief, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated 23, Abingdon Street, 12th October 1881.

Madras Harbour Moorings.

THE orders of the Government of Madras, No. 1797 W. of 21st July, and No. 2184 W. of 3rd September, having been referred to me for remarks, I beg to submit the following.

2. The former is based upon a letter from the Master Attendant in which he says "our increased experience of the capabilities of the Madras Harbour has convinced myself and the officers of this department that the system of buoys which was prepared in consultation with Messrs. Parkes and Thorowgood and submitted for orders of Government with my letter No. 2017, dated 11th March 1879, requires revision, and the substitution of a smaller number than was then considered practicable and a different disposition of them."

3. The question here raised was referred by the Government to a Committee, and that Committee has made an *ad interim* report, on which the second order above noted is based, simply recommending that the first steps in carrying out the sanctioned scheme be proceeded with.

4. I am bound to confess that I do not understand why the Master Attendant considered it necessary to bring this question before the Government at all. I presume that he has discretion, by the very nature of his office, to lay down as many or as few buoys as he thinks desirable, and he is in no way bound to the 29 sites shown on the plan, but has the choice of 96 sites.

5. The principle of the system is to distribute over the whole area of the harbour (except the space near the entrance, which must always be kept free for ships to bring up in) 134 points of attachment for mooring chains. These points of attachment consist of screws sunk in the ground 20 feet, with chains attached, of which only the last link is to remain above ground. Four of these are to form the attachment for a buoy, but if they are not immediately required for that purpose, they may be left for an indefinite time, during which they will be no obstruction to shipping. They will only require that some small object, such as a log of wood more conspicuous at the bottom of the harbour than the end link of a chain, be attached to each that they may be found by a diver when required.

6. I cannot imagine any distribution of these screws which would give a greater latitude of choice to the harbour authorities for the positions of the buoys than that adopted, and I consider it of great importance that there should be this latitude of

choice, not only for present, but for future, arrangements. It may be that the number of screws is unnecessarily great for present requirements, but their fixing requires special appliances which may not be available when an extension of accommodation is required, and as the whole expenditure upon their purchase and fixing is only about Rs. 50,000, there does not appear to be much object in deferring the fixing of such portion as might, so far as immediate arrangements are concerned, be dispensed with, to be hereafter fixed at a much increased cost.

7. I would therefore express a hope that these considerations be weighed before any departure is permitted from the arrangement of the screws already sanctioned (with one small modification which I have already suggested to Mr. Thorowgood), but the number and position of the buoys is a question on which I have no opinion to offer.

Read also—

No. 118-B. From F. N. THOROWGOOD, Esq., M. Inst. C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 9th November 1881, No. 58 W.

I HAVE the honor to submit the following report in reply to the Order of Government No. 2701 W. of the 2nd November, on a letter* from the Government of India.

* No. 379 A-C, 22nd October 1881.

2. I forwarded for the Government of India, with my letter No. 54 W. of 24th October 1881, a plan showing the state of the harbour at the end of September, and this may be taken practically to represent the present state of affairs as regards the lengths of the piers, the depths of water, and the state of the shore within and without the harbour.

3. STATE OF THE PIERS.—The two piers are now completed in length, and terminate in water eight fathoms deep below mean sea level, with an opening of 550 feet between their terminations. There yet remains to be built on each pier a return wall or horn, the object of which is to prevent the waves from running round the curved walls, by deflecting them off at first starting.

4. DATE OF COMPLETION.—These horns are only 70 feet in length, but they are designed on so sharp a curve that it will be necessary to alter the wheels of the Titan cranes before any blocks can be set. The two cranes have likewise to be turned completely round in their own length, which will probably be a risky and difficult undertaking. I do not therefore think that the piers will be actually and finally completed before April of next year.

5. CONCRETE BLOCK-WORK.—The length of the concrete block-work of the north pier is 3,870 lineal feet, and this has been built in $4\frac{1}{2}$ years. The length of the block-work of the south pier is 3,972 feet, and this has been built in 4 years. The estimated quantity of concrete blocks for the piers was 2,00,100 cubic yards; the quantity actually used has been 2,06,581 cubic yards, and it is possible that about 80 cubic yards additional will still be required.

6. SETTLEMENT.—Towards the ends of the two piers, where the rubble foundation is deep, there has been in some places an excess of settlement by the compression of the underlying rubble. This settlement has, however, never brought the work down to more than 9 inches lower than the designed height of 3 feet 6 inches above high water. The general appearance of the upper surface of the whole 7,842 feet of block-work is fairly regular, although irregularities are conspicuous at some places on close inspection. During the construction of the piers no block has ever been bodily displaced by the sea, but in November 1880 one block at the extreme end of the north pier (as it was then) was undermined and sunk down 3 feet. The shallow-water portions of the piers also suffered during construction, owing to the foundations being buried in sand. Some repairs will be necessary to those portions when the piers are completed, but I have not judged it necessary to carry these out yet because of the traffic along the piers.

7. SHELTER AFFORDED.—The harbour affords excellent shelter now during all winds except those from due east, and with the wind in this quarter the surf is greatly reduced, but not entirely abolished. All steamers calling at Madras now enter

the harbour, and there can be no doubt as to the immense benefit derived from the work. Large full-rigged sailing ships also come inside during the fair season, and are at present only excluded during the storm months on account of the absence of a steam tug and the backward state of the moorings.

8. MOORINGS.—The fixing of the moorings is proceeding but slowly, the executive difficulties having proved heavier than was anticipated. These, however, are diminishing as we gain more experience. There are now nine shallow water moorings fixed in position, and one buoy attached to four screws is fixed in nearly $4\frac{1}{2}$ fathom water. These buoys are used freely by vessels, but the moorings in deeper water are what are more needed at present, and these will now be proceeded with whenever the sea is sufficiently smooth, for the surface has to be perfectly calm to allow of the screwing apparatus to be worked.

9. DEPTH OF WATER.—The bottom of the harbour was surveyed by the Harbour Works staff in September last with the utmost care and accuracy, and the result has been submitted to Government with * G.O., No. 2521 W., dated 15th October 1881. approval.* There is absolutely no silting up except in the south corner, and this is easily accounted for. The depths were compared with those of September 1879, and in both instances are reduced to what is called DeHavilland's mean sea level, which seems to be in reality about 1 foot below high water.

10. With reference to the probable expenditure during the current year, I have carefully gone into each head of account, and I believe that the total sum granted for the current year will be sufficient.

11. EXPENDITURE.—The following table will place the figures more clearly:—

	RS.
Amount allotted as per budget estimate, 1881-82 ...	3,78,247
First supplemental grant—G.O., No. 1483 W., 14th June 1881 ...	73,822
Second " " " " 1997 W., of 13th August 1881 ...	2,00,000
Third " " " " 2475 W., 8th October 1881 ...	74,000
(This was on account of the Madras Railway).	
Total ...	7,26,069
Expenditure up to 31st October (approximate) ...	5,14,225
Balance for remaining five months ...	2,11,844
Estimated in detail to be expended up to 31st March 1882 ...	2,02,724
Balance ...	9,120

I have allowed for payments to be made in England for moorings and for all other expenses that I can think of as likely to occur, but not for any very heavy charge on account of purchase of land to the north of the harbour, as I do not know how that matter stands. It seems therefore that for the remainder of the current year no extra funds will be needed.

12. For the ensuing year 1882-83 the executive work will be confined to completing the moorings, fixing a lighthouse and generally closing the work, and possibly for purchasing land to the north or carrying on heavy protective works. It is hard to estimate at this date what will be required, as the months of November and December may bring such seas as will do more damage to property than has yet occurred. With such a possibility in view I think Rs. 2,00,000 ought to be available for next year. It must, however, be borne in mind that Rs. 80,000 may pretty safely be reckoned upon for the sale of plant, and that possibly some gain may accrue from the land newly formed to the south of the harbour.

No. 2661.

REFERRED to the Master Attendant, Administrative Department, Madras, for any observations he may wish to offer, particularly on the subject of paragraph 7.

14th November 1881.

(Signed) R. H. SANKEY, Col., R.E.,
Secy. to Govt., P.W.D.

No. 118-C. FROM J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 19th November 1881, No. 10176.

The altered conditions of the harbour render it unnecessary to notice any portion of the letter, No. 58 W., dated 9th November 1881, from the Superintendent of the Madras Harbour Works, except paragraph 7, and on that I have the honor to forward the following remarks.

2. A very considerable amount of shelter is still given to steamers in respect of landing and shipping operations, and as far the use of the harbour is of great benefit to the port, but owing to the large space occupied by the wrecks of the *Holart* and *Sallybury*, and the necessity of giving the injured walls a wide berth, I have felt it necessary to limit the entry of steamers to three at one time. It is possible, therefore, though at this season not probable, that vessels might have to wait their turns for a few hours. The distribution of the mooring chains already laid down in the south corner also limits the practicable space on that side. The subject of the moorings will have to be carefully reconsidered. Mr. Thorowgood in a letter to me says it is imperatively necessary that the buoys should keep the ground shackle well

* Dated 12th October 1881, herewith returned. off the ground. Mr. Parkes in a letter, recently forwarded to me by Government for report on the same subject, says that the cables and bridles may be allowed to lie on the ground for an indefinite period. One thing is certain that an ample amount of play must be given to the buoys, without which the moorings cannot be safe. I am informed, though not officially, that the large buoy which parted its fastening without any ship at it, was hove down to the upper shackle with a force equal to six tons. It is obvious that with a sea running 10 or 12 feet high something must go. I expected the buoy, which is very thin material, would have collapsed, but it seems the chain broke. All doubts about the safety of these moorings must be removed before they can be brought into general use. I suppose they were tested in England, but information on that head should be sought from the India Office.

3. As regards the steam tug, Mr. Green, who I had hoped would have carried out the order for me, informs me that the India Office declined his interference, and deputed the work to their broker. The tug would doubtless have been here before the accident, if the former arrangement had been uninterrupted, and the choice would have that of practical men. The want of success that has attended all indents for steam vessels for this Presidency hitherto makes me anxious for this one. It is unnecessary to say she would be of great use now.

No. 119. ORDER THEREON, 25th November 1881, No. 2954 W.

ORDERED that the reports above recorded from the Superintendent, Madras Harbour Works, and the Master Attendant, Madras, be forwarded to the Government of India, with reference to their letter of the 22nd October, No. 379 A.G.

2. The Government of India will also be furnished with the subsequent reports made by the Chief Engineer, Public Works Department, and the Superintendent of the Madras Harbour Works, detailing the damage sustained by the harbour by the recent storm.

(Here enter No. 2955 W., dated 25th November 1881.)

(True Extract.)

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

To the Superintendent, Madras Harbour Works,
Public Works Department, with copy of Note by the Honorable W. Huddleston,
Master Attendant

Encl. E. C. Shanker.

Specs Copies

BUILDINGS AND ROADS
CIVIL WORKS

GOVT. OF 1881

PUBLIC WORKS.

THE SUPERINTENDENT
MADRAS HARBOUR WORKS

NOVEMBER
Nos. 118-119.

Madras Harbour Works—Reports of
the Engineer-in-Chief, and the
amount of funds required in 1882-83.
Report of the Engineer-in-Chief,
Madras Harbour Works, dated 1st
November 1881, and forwarded to the
Government of India.

2854
PUBLIC WORKS DEPARTMENT.

Buildings and Roads
Civil Works.

No. 2955 W.

No. 120.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,

Public Works Department.

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

Public Works Department.

SIR,—In your letter, No. 379 A.G., dated 22nd October 1881, the Madras Government were requested to supply a special report on the present state of the Harbour Works, the sufficiency of the grant already assigned for the work for the current official year, and the probable amount, if any, that will be required next year.

2. The report recorded with G.O., No. 2954 W., 25th November 1881, was accordingly drawn up by the Superintendent of the Harbour Works; but the Government of India are aware that since the date of that paper the works have sustained severe damage, the details of which, so far as they have yet been ascertained, are described in the two reports quoted in the margin, copies of which are also forwarded with this letter. The figures given by the Superintendent of the Harbour Works in

Vide G.O., No. 2854 W., dated 15th November 1881, and G.O., No. 2927 W., dated 23rd November 1881.

his report of the 9th November will now require modification. But the exact sums that will be necessary for expenditure during the present and ensuing official years cannot be stated till a decision has been arrived at as to the nature and extent of the works of restoration that it will be desirable to sanction. A report on this point will in due course be laid before the Government of India after proper surveys and soundings have been completed and the works inspected by Mr. Parkes, who is expected in this country in December.

I have the honor to be,

Sir,

Your most obedient servant,

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

Fort St. George,
25th November 1881.

Encl. E. C. Shanker.
Spare Copies

ENGINEERING AND ROADS
CIVIL WORKS.

Govt. of Madras
PUBLIC WORKS.

THE SECRETARY TO THE
GOVERNMENT OF INDIA

Date: November, 1881

And

Recd

Govt. of Madras, No. 1201 W.

NOVEMBER.

No. 1201

Reference is made to the report and to the
estimate for the year 1881-82, and to the
order of the Government of India, dated
the 1st of November, 1881, in which it is
stated that the Government of India
will be pleased to consider the
estimate for the year 1881-82, and to
order the necessary expenditure to be
made thereon.

All communications
should be addressed
to the Secretary.

No. 279 A.G.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ACCOUNT.

General

To the Secretary to the
Government of Madras,
Public Works Department
Simla, 22nd October, 1881.
Recd 25/10/81.

Sir,

I am directed to request that
you will furnish the Government of India at
a very early date with a special report on
the present state of the Harbour works,
the sufficiency of the grant already assigned
for the works for the current year and the
probable amount, if any, that will be
needed next year.

I have the honour to be,
Sir,

Your most obedient servant

M. D. D. C. C.
Offy Secy to Govt of India

P. M. G. No 6300

Recd. 31 Oct. 81

B. N. 2701 W. of 2nd Nov/81

Communicated to
the Superintendent of
the Madras Harbour
Works for an early report

Att

31 Oct/81

Indexed //

Encl. in Receipt Repr.

Supdt. Madras H. Works
Recd. 2-11-81

Madras Harbour Moorings

23. Abingdon Street

12th October 1881.

Sir,

The orders of the Government of Madras No 1797 W of 21st July and No 2184 W of 3rd September having been referred to me for remarks I beg to submit the following:

2. The former is based upon a letter from the Master Attendant in which he says "our increased experience of the capabilities of the Madras Harbour has convinced myself and the officers of this Department that the system of Buoys which was prepared in consultation with Messrs Parkes and Thornycroft and submitted for Orders of Government with my letter No 2017 dated 11th March 1879 requires revision, and the substitution of a smaller number than was then considered practicable and a different disposition of them"

The Secretary to Government

Public Works Department

Madras.

3 The question here raised was referred by the Government to a Committee and that Committee has made an ad interim report on which the second order above noted is based, simply recommending that the first steps in carrying out the sanctioned scheme be proceeded with.

4 I am bound to confess that I do not understand why the Master Attendant considered it necessary to bring this question before the Government at all. I presume that he has discretion, by the very nature of his office, to lay down as many or as few buoys as he thinks desirable, and he is in no way bound to the 24 sites shown on the plan but has the choice of 96 sites.

5 The principle of the system is to distribute over the whole area of the Harbour (except the space near the entrance, which must always be kept free for ships to bring up in) 134 points of attachment for mooring chains. These points of attachment consist of screws sunk in the ground 20 feet, with chains attached, of which only the last link is to remain above ground. Some of these are to form the attachment for a buoy, but if they are not immediately required for that purpose they may

be left for an indefinite time, during which they will be no obstruction to shipping. They will only require that some small object, such as a log of wood, more conspicuous at the bottom of the Harbour than the end link of a chain, be attached to each, that they may be found by a diver when required.

6 I cannot imagine any distribution of these screws which would give a greater latitude of choice to the Harbour authorities for the positions of the buoys than that adopted and I consider it of great importance that there should be this latitude of choice not only for present, but for future arrangements. It may be that the number of screws is unnecessarily great for present requirements, but their fixing requires special appliances which may not be available when an extension of accommodation is required, and as the whole expenditure upon their purchase and fixing is only about 50,000 rupees, there does not appear to be much object in deferring the fixing of such portion as might, so far as immediate arrangements are concerned, be dispensed with, to be hereafter fixed at a much increased cost.

I would therefore express a hope that these considerations be weighed before any departure is permitted from the arrangement of the series already sanctioned (with one small modification which I have already suggested to Mr. Thoroughgood) but the number and position of the buoys is a question on which I have no opinion to offer.

I have the honor to be

Sir

Your most obedient servant

W Parkes

Read 10/11/81

P. 6

No. 58 W

25/11/81

From

THE SUPERINTENDENT,
MADRAS HARBOUR WORKS.

To Colonel R. M. Sankey, C.B.R.C.
Secretary to Government, P.W. Dept.
Buildings and Roads
MADRAS. 9th November 1881.

Sir,

I have the honor to submit the following report in reply to the Order of Government No. 2401. W of the 2nd November, on a letter from the Government of India.

2. I forwarded for the Government of India, with my letter No. 54 W of 24th October 1881, a plan showing the state of the Harbour at the end of September, and this may be taken practically to represent ^{the present} state of affairs as regards the lengths of the piers, the depths of water, and the state of the shore within and without the Harbour.

State of the piers

3 The two piers are now completed in length, and terminate in water

8.

8 fathoms deep below Mean Sea Level, with an opening of 550 feet between their terminations. There yet remains to be built on each pier a return wall or horn, the object of which is to prevent the waves from running round the curved walls, by deflecting them off at first starting.

4. These horns are only Date of completion 70 feet in length, but they are designed on so sharp a curve that it will be necessary to alter the wheels of the Titan cranes before any blocks can be set. The two cranes have likewise to be turned completely round in their own length, which will probably be a risky and difficult undertaking. I do not therefore think that the piers will be actually and finally completed before April of next year.

5. The length of the concrete Concrete Blockwork blockwork

85
35/10
blockwork of the North Pier is 3870 lineal feet, and this has been built in $4\frac{3}{4}$ years. The length of the blockwork of the South Pier is 3942 feet and this has been built in 4 years. The estimated quantity of concrete blocks for the piers was 200,100 cubic yards; the quantity actually used has been 200,581 cubic yards, and it is possible that about 80 cubic yards additional will still be required.

Settlement 6. Towards the ends of the two piers, where the rubble foundation is deep, there has been in some places an excess of settlement by the compression of the underlying rubble. This settlement has however, never brought the work down to more than 9 inches lower than the designed height of 3.6" above High Water. The general appearance of the upper surface of the whole 7842 feet of blockwork is fairly regular, although irregularities

irregularities are conspicuous at some places on close inspection. During the construction of the piers no block has ever been bodily displaced by the sea, but in November 1880 one block at the extreme end of the North Pier (as it was then) was undermined and sunk down 3 feet. The shallow water portions of the piers also suffered during construction, owing to the foundations being buried in sand. Some repairs will be necessary to those portions when the piers are completed, but I have not judged it necessary to carry these out yet because of the traffic along the piers.

7. The Harbour affords excellent shelter from during all winds except those from due East, and with the wind in this quarter the surf is greatly reduced but not entirely abolished.

Shelter afforded

Moorings

All steamers calling at Madras now enter the Harbour, and there can be no doubt as to the immense benefit derived from the work. Large full-rigged sailing ships also come inside during the fair season, and are at present only excluded during the storm months on account of the absence of a strain tug and the backward state of the moorings.

8. The fixing of the moorings is proceeding but slowly, the executive difficulties having proved heavier than was anticipated. These, however, are diminishing as we gain more experience. There are now nine shallow water moorings fixed in position, and one buoy attached to four screws is fixed in nearly $4\frac{1}{2}$ fathom water. These buoys are used freely by vessels, but the moorings in deeper water are what are
more

more needed at present, and these will now be proceeded with whenever the sea is sufficiently smooth; for the surface has to be perfectly calm to allow of the screwing apparatus to be worked.

9. The bottom of the Harbour Depth of water was surveyed by the Harbour Works staff in September last with the utmost care and accuracy, and the result has been submitted to Government with approval. There is absolutely no silting up except in the South corner, and this is easily accounted for. The depths were compared with those of September 1879, and in both instances are reduced to what is called Dr Havilland's Mean Sea Level which seems to be in reality about 1 foot below High Water.

Expenditure

10. With reference to the probable expenditure during the current year I have carefully gone into each head of account, and I believe that the total sum granted for the current year will be sufficient.

11. The following table will place the figures more clearly:-

Amount allotted as per Budget	Rs.
Estimate 81. 82	3,78,247
1 st Supplemental grant C.O.	
1483W June 14/81	73,822
2 nd do 1997W of 13 Aug. 81	2,00,000
3 rd do 2475W Oct. 8. 81	74,000
(This was on account of the Madras Railway).	
Total	7,26,069
Expenditure up to Oct. 31 st (approx)	5,14,225
Balance for remaining 5 months	2,11,844
Estimated in detail to be expended up to March 31 st 1882.	2,02,724
Balance	Rs. 9,120
I have allowed for payments to be made in England for moorings, and for all other expenses that I can	

can think of as likely to occur,
but not for any very heavy charge
on account of purchase of land
to the North of the Harbour, as I do
not know how that matter stands.
It seems therefore that for the
remainder of the current year
no extra funds will be needed.

12. For the ensuing year
1882-83 the executive work will
be confined to completing the
moorings, fixing a lighthouse
and generally closing the work,
and possibly for purchasing land
to the North or carrying on heavy
protective works. It is hard to estimate
at this date what will be required as
the months of November and
December may bring such seas
as will do more damage to property
than has yet occurred. With such
a possibility in view I think

Rs. 200,000

78
Rs. 200,000 ought to be available for
next year. It must however be borne
in mind that Rs. 80,000 may pretty
safely be reckoned upon for the
sale of plant, and that possibly
some gain may accrue from the
land newly formed to the South
of the Harbour.

I have the honour to be,
Sir,

Your most Obedt Servt.

G. H. Harrowood M. A. Esq.
Superintendent
M. H. Works

J. M.
Encl. E. B. C.

No 2661 of 14 Nov 81

Buildings and Roads

From

The Superintendent
Madras Harbour Works

No 58 W
Dated 9th November 1881

No of Enclosures Nil

Reports present of the works at the probable improvement of funds that will be required in 1882/83

Referred to the Master Attendant, Administrative Dept. Madras, for any observations he may wish to offer, particularly on the subject of paragraph 7.

C. W. Sankar Col R.E.
Secty. to Govt. P.W.D.

The Master Attendant in original to be returned.

Administrative Department.

No. 10170

Madras Marine Office,
November 19th 1881.

From

J. H. TAYLOR, Esq., Lieut., R.N.R.,
Master Attendant,
Administrative Department,
Madras.

To

Colonel R. W. Sankar, C.B. R.E.

Chief Secretary to Government,
Public Work, Marine Department,
Fort Saint George.

Sir,

The altered conditions of the Harbour render it unnecessary to notice any portion of the letter of 5th W, dated November 9th 1881, from the Superintendent of the Madras Harbour Works, except para 7, and in that I have the honour to forward the following remarks.

2. A very considerable amount of shelter is still given to Steamers in respect of landing and shipping operations, and so far the use of the Harbour is of great benefit to the Port, but owing to the large space occupied by the vessels of the "Botani" and "Solisbury", and the necessity of giving the engaged vessels a wide berth, I have felt it necessary to limit the entry of Steamers to three at one time. It is possible, therefore, though at the season not probable, that vessels might have to wait their turns for a few hours. The distribution of the mooring chains already laid down in the South corner also limits the practicable space.

on that side. The subject of the moorings will
have to be carefully reconsidered. Mr. Thorne-
-ton in a letter to me says it is imperatively
necessary that the buoys should keep the
ground shackle well off the ground. Mr.
Parker in a letter recently forwarded to me
by Government for report on the same subject
says that the cables and bridle may be
allowed to lie in the ground for an indefinite
period. One thing is certain that an ample
amount of play must be given to the buoys,
without which the moorings cannot be
safe. I am informed, though not officially,
that the large buoy, which parted its fastening
without any ship at it, was hove down to the
upper shackle with a force equal to six tons.
It is obvious that with a sea running ten or
twelve feet high something must go. I
expected the buoy, which is very thin material
would have collapsed, but it seems the
chain broke. All doubts about the safety
of these moorings must be removed before
they can be brought into general use.
I suppose they were tested in England, but
information on that head should be sought
from the India Office.

³
dated 12 October 1881
herewith returned

3

In regard to the Steam Tug, Mr. J. H. Green, who I had hoped would have carried
out the order for me, informs me that the
India Office declined his interference, and
deputed the work to their broker. The Tug
would doubtless have been here before the ac-
cident, if the former arrangement had been
uninterrupted, and the choice would have
been that of practical men. The want of success
that has attended all attempts for steam
vessels for this Presidency hitherto makes
me anxious for this one. It is unnecessary
to say she would be of great use now.

Have the honor to be
Sir

Your most obedient servant

M. J. J.

Master Attendant

Administrative Department

M

From

The Master Attendant,
Administrative Dept.
Madras,

To

The Chief Secy. to Govt.,
Marine Department,
Fort Saint George.

Dated

188

Received

}

No.

Enclosure.

f.b. No. 901 W. 2-4-81.
 " " 1483 W. 14-6-81.
 " " 1797 W. 21-7-81.
 " " 1997 W. 13-8-81.
 " " 2184 W. 3-9-81.
 " " 2475 W. 8-10-81.
 " " 2521 W. 15-10-81.
 " " 2676 W. 1-11-81.
 " " 2701 W. 2-11-81.
 C.S. " 2661. 14-11-81.

From

THE MASTER ATTENDANT,
 ADMINISTRATIVE DEPARTMENT,
 Madras,
 To Col R. H. Sankar CB. Rd.
 THE CHIEF SECY. TO GOVERNMENT,
 Public Works DEPARTMENT,
 Fort St. George.

No.

Dated 19th November 1881.
 Received 21

No. 10176

Subject.

Offering remarks on the space
 now available for vessels in the
 harbour, on the moorings to be
 laid down, and regarding the
 Steam Tug for the harbour.

Incls. No 2

C. 21.11.81.
 C. 21.11.81.

(188) DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT

Under date the

Read the following:-

From the Govt. of India - (No. 3792 of 12th 1881)
 Read also
 From the Superintendent
 Madras Harbour Works } (No. 58 of 12th 1881)
 From the Master Attendant
 Administrative Dept. } (No. 10176 of 19th 1881)

Ordered that the
 reports above recorded
 from the Superintendent
 Madras Harbour Works
 and the Master Attendant
 Madras be forwarded
 to the Government of
 India with reference
 to their letter of the 22nd
 October No. 3792 of 1881.

The Government of
 India will also be fur-
 nished with the subse-
 quent reports made
 by the Chief Engineer
 Public Works Dept.
 and the Superintendent

I think the propriety of
 continuing to lay the
 special rate of 100 lbs.
 lately imposed. and to
 be reconsidered now
 that the amt. of advantage
 afforded to the shipping
 visiting the port has been
 so materially reduced.
 Refers the subject to the
 Hon^{ble} Secy. to Govt. & report.
 Perhaps this should be done
 in Marine Dept.

of the Madras Harbour
Works detailing the
damage sustained
by the Harbour by the
recent storm.

(H.C. No. 2955W of 15 Nov 81)

To The Secretary to the
Government of India.
P.W. Dept.

Sir
In your letter No.
3794 of 22nd
October 1881, the Madras
Government were requested
to supply a special
report on the present
state of the Harbour
Works, the sufficiency
of the grant already
assigned for the work
for the current officials

To
The Superintendent
M. H. Woodroffe
" Marine Dept. with
copy of note by the Hon.
W. Henderson.
" Minister Attendant.
Sept 7-12-81

* Vide G.O. 2856W of 15
Nov. 81.

G.O. 2997W of 23rd Nov
(being printed)

29/11/81
year; and the probable
amount, if any, that will
be required next year.

The report recorded
with G.O. 2995W of 25 Nov.
1881 was accordingly
drawn up by the Super-
intendent of the Harbour
Works - but the Government
of India are aware that
since the date of that
paper, the works have
sustained severe damage
the details of which, so
far as they have yet
been ascertained, are
described in the two
reports quoted in the
margin, copies of which
are also forwarded with
this letter. The figures
given by the Superintendent
of the Harbour Works
in his report of the 9th

November will now re-
quire no modifications. But
the exact sums that will
be necessary for expen-
-diture during the present
and ensuing official
years cannot be stated
till a decision has been
arrived at as to the na-
-ture and extent of the
works of restoration
that it will be desirable
to sanction. A report
on this point will in
due course be laid
before the Government
of India after proper
survey and soundings
have been completed and the
works inspected by Mr.
Parker who is expert
in this country in
acquiescence.

R. J.
O. H. H.
29. 11. 87
C. 24. 11. Sept 7-12-87

See Mr. B. H. H. H. H. H.

18

6592
6874
Govt. of (1881) Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. No. 571881, No. 2544/81

Nos. 118 to 120

Re. S. No. 20. Report
Regarding the state of
the — and the probable
amount of funds reqd
in 1882-83, with the view
of the damage to the
Coastal works during
the late cyclone ordered
to be forwarded to the
Govt. India.

Entered in Receipt Regr