(1) Number of pages 76

(2) Date of repair 10.12.87.

(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Public Works DEPARTMENT

G.O. No. / B.P. No. 2078 W

[✓ Press.] / Mis.

Dated 18-8-1886

Not to be folded or roughly handled.

18th August 1886, No. 2078 W., Public Works.

2078
1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers:—

From the Honorable R. W. BARLOW, C.S., Chairman, Harbour Trust Board, to the Secretary to Government, Public Works Department, dated Madras, 10th August 1886, No. 226.

I have the honor to forward extract of proceedings of a meeting of the Harbour Trust Board held at the sea custom house on Thursday, 29th July 1886, and, in accordance with the resolution then passed, enclose, herewith, progress report No. 21 W. of the Superintendent, Madras Harbour Works, together with the plan referred to therein.

2. The progress report has been recorded in the office of the Board by a copy having been made, but I have the honor to request that the plan may be returned.

Enclosure.

Extract from proceedings of the Harbour Trust Board, appointed under the provisions of section 7 of the Madras Harbour Trust Act (II of 1886), at a meeting held on Thursday, the 29th July 1886.

* * * * * *

Read letter from the Superintendent, Madras Harbour Works, No. 148 M., dated 23rd July 1886, forwarding progress report, &c.

5. Resolved that the same be submitted to Government for information.

* * * * * *

From F. N. THOROWGOOD, Esq., M. Inst., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 6th July 1886, No. 21 W.

I have the honor to submit a plan and report of the progress on these works during June. The amount of new pier built is very small, but the difficulties in the way are very great, and a slow advance is unavoidable until the new work gets further away from the old line of wall. When the complete new section of pier is reached (at a point 40 feet from the present site of working) the progress will be much more satisfactory.

2. *North pier base and superstructure.*—No rubble base has been deposited at the north pier during June as the swell from the south-east rendered managing the boats troublesome, and as the base is now well in advance of the blockwork as shown in red dotted lines on the plan.

3. On the 1st June the Titan crane, which had been withdrawn during May, was travelled out by locomotive engines to the end of the pier to resume the work of setting blocks in the new work. The spot at which the divers have to work is most unhappily situated, as during the present monsoon the swell perpetually rushes into the angle formed between the old and new work eddying round violently and

frequently making diving impossible. Nor is this all; for, on some occasions the swirl or eddy has been so strong that it has washed the rubble back again into the site for a block excavated at great labor by the divers. The result is that, in spite of all efforts, a length of only 19 feet of wall has been completed in June. This length represents the work of setting 16 concrete blocks in position by divers and filling up with cement concrete between the old and new walls, the concrete below high-water mark being deposited in large canvas bags.

4. As in 1877 the first portions of each of the two piers took the longest to build, so now, although from other causes, it is the first 150 feet of wall that will doubtless give the greatest trouble.

5. *North pier wavebreaker.*—No work was done at the screen of blocks called the wavebreaker during June, as all blocks that were old enough to be used in this work were given up to the south pier. Experience has shown me that the blocks for this work should not be less than 4 months old before being dropped by the claws into the sea. There yet remains a length of 920 feet of wavebreaker to be completed to protect the old portion of the north pier, as is shown on the plan. This work will be resumed in a few weeks, when a sufficient number of properly hardened blocks are available.

6. *Blockmaking.*—Concrete blocks were made throughout the whole of June, the rain occasionally interfering with work. I am still unable to carry this work on at its full speed, and must wait till more blocks are set in the superstructure of the two breakwaters. In June 223 blocks were made, representing 6,690 tons of concrete; all these blocks were for use in the wavebreakers. As blocks accumulate in the north pier yard they are removed and stacked on the ground at the south pier, as hitherto reported.

7. *South pier rubble base.*—A total quantity of 18,072 tons of material was deposited in the base and foreshore of the south pier. Of this quantity 918 tons are due to portions of concrete blocks blown up by dynamite in the line foundation.

8. One diving boat has been engaged in levelling the surface of the rubble ready for abutment or commencement of the superstructure, which will be taken in hand early in July, the Titan crane having first to be turned round through the angle of 180 degrees.

9. *South pier wavebreaker.*—The outer portion of the wavebreaker at the south pier was very nearly completed in June, but the work was much delayed by the sea which broke over this spot with great persistence. There were 97 blocks dropped over by the Titan, and these have nearly closed up the gap which existed between the two sections of the wavebreaker in May.

10. It now is more important to push on with the superstructure, and therefore the Titan crane will be devoted to this work, and for the present the wavebreaker will be left as it now is.

11. *Alteration in line of south pier.*—In Mr. A. L. Pogson's report for May 1886 (written with my approval and knowledge) he mentions, in paragraph 22, that the seas of 23rd May had overturned some of the old blocks in the south pier ruins. I now find that these blocks have fallen in the way of the proposed new line of work on the already prepared rubble base. I can see no alternative but to slightly alter the curve already agreed upon, so as to avoid some of the remains of the old wall. This is a matter that must be approved by the Engineer-in-Chief, and I await his advice by telegraph. In the meantime no delay need occur in commencing the superstructure, and the additional cost arising from the change of line will not be considerable. The items of additional expense will consist of some extra rubble in the foundation, and the alteration of the blocks already made for a curve of one radius to suit a curve of another radius. In addition to these there will be the unavoidable task of removing those blocks that have fallen actually on the line of foundation of the new wall.

12. *Pallávaram quarries.*—The outturn from the quarries during June has been very satisfactory, no less than 22,506 tons of stone having been quarried and sent to Madras. The trains have worked with regularity and the only mishaps at the quarry have been occasional landslips owing to the rain.

2078
2

13. *Stores from England.*—In June there arrived three vessels with stores from England—the S.S. *Coromandel,* with paint brushes and leather laces for belts, the *Almora,* with steel trolly wheels and pedestals and carpenters' tools, and the *Clan Drummond* with 48 truck wheels.

14. *Mr. A. L. Pogson in charge.*—During the greater part of May and up to 30th June the works were in charge of Mr. A. L. Pogson, Assistant Superintendent, and I beg to be permitted to record that he kept everything going in the most satisfactory manner, and proved himself quite equal to the occasion.

From F. N. THOROWGOOD, Esq., M. Inst., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 15th July 1886, No. 24 W.

I have the honor to state that I have this day heard from Mr. Parkes on the subject of what I referred to in my letter, No. 21 W., of 6th July, paragraph 11, touching a possible alteration in the line of the south pier.

2. No alteration from Mr. Parkes' design will be necessary, and therefore no additional rubble will be required, as I have feared might be the case. The original line will be adhered to, but the difficulty of the overturned blocks lying in the way will necessarily prove a troublesome one.

Order—dated 18th August 1886, No. 2078 W., Public Works.

Recorded.

2. Paragraph 14 of the report is noticed with satisfaction.

(True Extract.)

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

To the Chairman, Harbour Trust Board, with one plan returned.
" Marine Department.
" Newspapers.
" Consg Engr for Rys

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1886) Madras.

PUBLIC WORKS.

Dated August, 18th.

Recd. *Encl.*

G.O., 18th Aug. 1886, No. 2078 W.

AUGUST.

Madras Harbour Works

The progress report for June 1886, recorded with a remark.

2078/3

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 220¼ 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, $12,224\frac{1}{2}$ tons of stone being deposited, making a total of $92,056\frac{3}{4}$ tons, of which 12,030 tons is due to old blocks blown to pieces by divers.

13. Of the $12,224\frac{1}{2}$ tons of stone deposited, $2,638\frac{3}{4}$ 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. *Pallávaram quarries.*—The outturn of stone from Pallávaram 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 $13,461\frac{3}{4}$ 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 employés, 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 employés 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.

Govt. of (1886) Madras.

PUBLIC WORKS.

Dated June, 30th.

Recd. *En*

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

JUNE.

Madras Harbour Works

The progress report for May 1886 recorded with remarks.

2078
5

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

Order—dated 12th July 1886, No. 378, Marine.

The Government observe that under the Madras Harbour Trust Act, the harbour and its appurtenances become the absolute property of the Board of Trustees; the sums necessary to complete it are advanced to the Board by the Secretary of State, the Board paying interest thereon; the salaries of all officers, including the Harbour Works Superintendent and his subordinates, are paid from the sums so advanced; and the Board are competent to dispense with the services of all such officers with the previous sanction of the Governor in Council. In these circumstances it is clear that the Superintendent must address all communications on matters relating to the harbour works to the Chairman of the Harbour Trust Board, who will address the Secretary to Government in the Public Works Department on all questions which the Board may desire to refer for the consideration of Government.

(True Extract.)

E. F. WEBSTER,
Chief Secretary.

To the Public Works Department.
„ Chairman, Harbour Trust Board.
„ Port Officer, Madras.

Exd. T. O'Connor.

Govt. of (1886) Madras.

MARINE.

Issued

Recd. Encl.

G.O., 12th July 1886, No. 378.

JULY.

Ex. 17 exd by 15.7.

Madras Harbour Trust.

Defining the position of the Superintenden Harbour Works, with reference to the Harbour Trust Board, and directing that all communications from him on matters relating to harbour works should be addressed to the Chairman of the — Board.

CHIEF SECRETA
OOTACAMUND

Vide 430 D - 21-7-86

20/7
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Note for Secretary

I thought it had been decided that these progress reports were to be submitted through the Harbour Board —
This should I think be done in view to the Trustees having an opportunity of submitting their remarks on the state of progress which could be disposed of by G.O. at once —
If they offer any remarks then another G.O. will be necessary H.S. 16/7

Draft G.O. to be issued accordingly. [illegible]
17/7

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p H. M. H. Works
ked to original papers including plan Despd 21/7. Cu

20.7.86

Chairman

P. W. D.

No 430 D of 21st July 1886.

2078/7

Memorandum.

Letter from the Supdt: Madras Harbour Works No: 21 W of 6th July 1886.
Do do do No: 24 W " 15th July 1886.

The foregoing papers will be returned to the Supdt: Madras Harb Works, for transmission thro' the Chairman, Madr Harbour Trust, in accordance with G.O. dated 12th July 1886 No: 378 Marine.

+ No 1789 W of 15.7.86

20.7.86

Supdt: M H Works
with original papers including plan Desptd 21/7. Cu

No. 4308 G. 2d July 86

2078W

No. 2 W. ~~No. 3~~

2078
9

FROM
THE SUPERINTENDENT,
MADRAS HARBOUR WORKS,

To The Hon. Col. J. H. M. Shaw-Stewart. R.E.
Secretary to Government P.W. Dept.

MADRAS, 6th July 1886.

Sir,

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formed

2078
8

H.C.–

Kindly note that G.O. No. 2078 W dated 18th August 1886 has been comd. to the C.E. for Rys. & have necessary correction made in the original & spare copies at Madras – Please also supply to this office the usual spare copies that may be required –

D.P.
30-8-86

Despatcher
For attention

T.P.
1/9/86

No. 21W.

From
The SUPERINTENDENT,
MADRAS HARBOUR WORKS,

To The Hon. Col. J. H. M. Shaw-Stewart. R.E.
Secretary to Government P.W. Dept.

Madras, 6th July 1886.

Sir,

I have the honour to submit a plan and report of the progress on these works during June. The amount of new pier built is very small, but the difficulties in the way are very great and a slow advance is unavoidable until the new work gets further away from the old line of wall. When the complete new section of pier is reached (at a point 40 feet from the present site of working) the progress will be much more satisfactory.

North Pier Base and Superstructure

2. No rubble base has been deposited at the North Pier during June as the swell from the South East rendered managing the boats trouble-some, and as the base is now well in advance of the blockwork as shewn in red dotted lines on the plan.

3. On the 1st June the Titan Crane, which had been withdrawn during May, was travelled out by locomotive engines to the end of the pier to resume the work of setting blocks in the new work. The spot at which the divers have to work is most unhappily situated, as during the present monsoon the swell perpetually rushes into the angle

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formed between the old and new work eddying round violently and frequently making diving impossible. Nor is this all, for on some occasions the swirl or eddy has been so strong that it has washed the rubble back again into the site for a block excavated at great labour by the divers. The result is that in spite of all efforts a length of only 19 feet of wall has been completed in June. This length represents the work of setting 16 Concrete blocks in position by divers, and filling up with cement concrete between the old and new walls, the Concrete below H.W. mark being deposited in large canvas bags.

4. As in 1877 the first portions of each of the two piers took the longest to build, so now, although from other causes, it is the first 150 feet of wall that will doubtless give the greatest trouble.

North Pier
Wavebreaker

5. No work was done at the screen of blocks called the wavebreaker during June, as all blocks that were old enough to be used in this work were given up to the South Pier. Experience has shewn me that the blocks for this work should not be less than 4 months old before being dropped by the claws into the sea. There yet remains a length of 920 feet of wavebreaker to be completed to protect the old portion of the North pier, as is shewn on the plan. This work will be resumed in a few weeks, when a sufficient number of properly hardened blocks are available.

Blockmaking

6. Concrete blocks were made throughout the whole of June, the rain as usually interfering with

with work. I am still unable to carry this work on at its full speed, and must wait till more blocks are set in the superstructure of the two breakwaters. In June 223 blocks were made, representing 6,690 tons of concrete, all these blocks were for use in the Wavebreakers. As blocks accumulate in the North pier yard they are removed and stacked on the ground at the South Pier, as hitherto reported.

South Pier
Rubble Base

7. A total quantity of 10,072 tons of material was deposited in the base and foreshore of the South pier. Of this quantity 918 tons are due to portions of concrete blocks blown up by dynamite in the line foundation.

8. One diving boat has been engaged in levelling the surface of the rubble, ready for abutment or commencement of the superstructure, which will be taken in hand early in July the Titan crane having first to be turned round through the angle of 180 degrees.

South Pier
Wavebreaker

9. The outer portion of the Wavebreaker at the South Pier was very nearly completed in June, but the work was much delayed by the sea which broke over this spot with great persistence. There were 97 blocks dropped over by the Titan, and these have nearly closed up the gap which existed between the two sections of the wavebreaker in May.

10. It now is more important to push on with the superstructure and therefore the Titan crane will be devoted to this work and for the present the wavebreaker will be left as it now is.

11.

No. 2111.

FROM
THE SUPERINTENDENT,
MADRAS HARBOUR WORKS,

TO The Hon. Col. J. H. M. Shaw-Stewart. R.E.
Secretary to Government P.W. Depth.

MADRAS, 6th July 1886.

Sir,

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10. It now is more important to push on with the superstructure and therefore the Titan crane will be devoted to this work and for the present the wavebreaker will be left as it now is.

11.

Alteration in line of South Pier.

11. In Mr. A. L. Pogson's report for May 1886 (written with my approval and knowledge) he mentions in paragraph 22 that the seas of May 25th had overturned some of the old blocks in the South Pier ruins. I now find that these blocks have fallen in the way of the proposed new line of work on the already prepared rubble base. I can see no alternative but to slightly alter the curve already agreed upon, so as to avoid some of the remains of the old wall. This is a matter that must be approved by the Engineer-in-Chief and I await his advice by telegraph. In the meantime no delay need occur in commencing the superstructure, and the additional cost arising from the change of line will not be considerable. The items of additional expense will consist of some extra rubble in the foundation, and the alteration of the blocks already made for a curve of one radius to suit a curve of another radius. In addition to these there will be the unavoidable task of removing those blocks that have fallen actually on the line of foundation of the new wall.

Pallavaram Quarries

12. The out turn from the quarries during June has been very satisfactory no less than 22506 tons of Stone having been quarried and sent to Madras. The trains have worked with regularity, and the only mishaps at the quarry have been occasional landslips owing to the rain.

Stores from England. 13. In June there arrived three vessels with Stores from England. The S.S. "Coromandel" with paint-brushes and leather laces for belts, the "Aurora" with steel trolly wheels and pedestals, and carpenters' tools; and the "Clan Drummond" with 48 truck wheels.

Mr. A. L. Pogson in charge.

14. During the greater part of May and up to June 30th the works were in charge of Mr. A. L. Pogson, Assistant Superintendent, and I beg to be permitted to record that he kept everything going in the most satisfactory manner and proved himself quite equal to the occasion.

I have the honour to be,
Sir,
Your most Obedient Servant
F. W. Thorowgood. M.Inst.C.E.
Superintendent
Madras Harbour Works

Enclo 3

P.V.C. No. 5227.

6231/86

Recd. 7. 7. 86

2078/12

G.6-1651 W. 30.6.86.

(5)

Pwks 5227

Buildings & Roads

~~Recorded~~

~~2. Para 14 is noted with satisfaction~~

8/7/86

From

The Superintendent
Madras Harbour Works

Dated 6th } July 1886
Recd }

~~12-7-86~~

No 21 W

No of Enclosures One (plan)

To the Chairman
Madras Harbour Imp.
" Marine Deptt.

O.G. 44/7. Cir 12/7
G. 8.7.86

Progress Report

Submits ——— for June 86
with a plan.

~~Dw~~ | 13

No. 24 W

126

2078
13

FROM
The SUPERINTENDENT,
MADRAS HARBOUR WORKS,

To The Hon: Col. J. H. M. Shaw Stewart, R.E.
Secretary to Government P. W. D.

MADRAS, 15th July 1886.

Sir,

I have the honour to state that I have this day heard from Mr Parkes on the subject of what I referred to in my letter No 21 W of July 6th para 11 touching a possible alteration in the line of the South Pier.

in No 5227 and 5005 on the 8/7

2. No alteration from Mr Parkes' design will be necessary, and therefore no additional rubble will be required as I have feared might be the case. The original line will be adhered to, but the difficulty of the overturned blocks lying in the way will necessarily prove a troublesome one.—

I have the honour to be,
Sir,
Your most Obedient Servant,
F. W. Thorrowgood M. Inst. C.E.
Superintendent,
Madras Harbour Works.—

Ed 2
PW. Ch.8885
623/86

Ed 62
Ch. 6231/86
Recd: 16.7.86

2071
74

(12) P.W.C. No 5550.

Buildings & Roads.

From

The Superintendent
Madras Harbour Works

16/7/86

Dated 15th } July 1886.
Recd 16th } July 1886.

No 24/W

No of Enclosures. Nil

South Pier.

States that no alteration from Mr Parkes' design of the line of — is necessary

6 16-7-86

~~Dev~~/W

18th [illegible] No 2078

[illegible]

V. & Co. H.T. No. 1

pi 1

Harbour Trust Board Office,
MADRAS, 10th August 1886.

No. 226

2078/15

FROM
The Honorable R.W. Barlow C.S.
CHAIRMAN, HARBOUR TRUST BOARD,
MADRAS,

TO
The Hon: Col: J.H.M. Shaw Stewart R.E.
~~Chief~~ SECRETARY TO GOVERNMENT,
Public Works ~~Marine~~ Department.

SIR,

I have the honor to forward extract of Proceedings of a Meeting of the Harbour Trust Board, held at the Sea Custom House on Thursday 29th July 1886, and in accordance with the resolution then passed, enclose herewith progress report No. 21 W of the Superintendent Madras Harbour Works, together with the plan referred to therein.

2. The progress report has been recorded in the Office of the Board by a copy having been made, but I have the honour to request that

Guelol
P.W. 6231/86

2071
17

G. 6. 1657 W. 30. 6. 86.
4360 D 21. 7. 86

~~Letter H. T. [illegible]~~

~~No. 2078 W. appd.~~ BOR [illegible]

A

Recorded

2. Paragraph 14 of the report is noticed with satisfaction

12/8/86

14. 8. 86

P.W.C. No. 02315

MARINE DEPARTMENT.

(16)

FROM

THE CHAIRMAN,
HARBOUR TRUST BOARD,
MADRAS,

TO

THE CHIEF SECRETARY TO GOVERNMENT,
Marine Department.

DATED 10th
RECEIVED 11th } August 1886.

ENCLOSURE 3. 4. (1 plan)

No. 226

SUBJECT.

Forwarding progress report from the Superintendent Madras Harbour Works for June 1886.

TO BE COMMUNICATED
TO NEWSPAPERS.

Chairman H. T. Board with 1 plan encl.
Marine Depts.
Newspapers
conveying engt. [illegible]

des. 20/8/86

Ord. [illegible] P. Cir 14/8
G 12. 8. 86 R. 18. 8. 86

6231

Govt. of 1886 Madras.

PUBLIC WORKS.

19/8/86

Dated

Recd. Encl.

G.O., 18 August 1886, No. 2078

Madras Harbour Works.

Re progress report for June '86, recorded with a remark.

60/5