(1) பக்கங்களின் எண்ணிக்கை 64

(2) புதுக்கித் திருப்பிய நாள் 23.2.89

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

38

தமிழ்நாடு அரசு

P.W.D துறை

அரசாணை எண்.
மு. கோப்புத் தாள் எண். 821

அச்சகம்
பலவகை

நாள் : 19-3-1889 ~~198~~

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

25-Sheets 24+1

ஆவண, கா-1—18,008—15-6-87.

32

19TH MARCH 1889, No. 821 W., PUBLIC WORKS.

821

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From R. W. BARLOW, Esq., C.S., Chairman, Harbour Trust Board, to the Chief Secretary to Government, Marine Department, dated Madras, 12th March 1889, No. 969.

I have the honor to acknowledge the receipt of G.O., No. 622 W., dated 2nd instant, and to submit herewith, for the information of Government, copy of resolution passed thereon by the Board at their last meeting, together with a copy of their Engineer's letter No. 1558, dated 8th instant, referred to therein, also the tracing which was not received until to-day ; hence the delay in transmitting the resolution.

2. The very early orders of Government are solicited as the trustees consider it is unsafe to leave the newly built portion of the north pier unprotected, and are of opinion that it would be better to proceed according to the sanctioned design, which their Engineer informs them was, he believes, Mr. Parkes' intention.

ENCLOSURES.

EXTRACT of Proceedings of the Trustees of the Harbour of Madras, at a Meeting held at the offices of the Board on Friday the 8th day of March 1889.

* * * *

8. Read G.O., No. 622 W., dated 2nd March 1889, passing orders on correspondence relating to proposals for completing the Madras Harbour.

Read minutes by Captain H. A. Street, H.M.'s I.M., Mr. F. B. Hanna, M.I.C.E., and the Chairman.

Read letter from the Engineer, Harbour Trust Board, No. 1558, dated 8th March, in reply to a reference made to him on the subject.

Resolved (*a*) that the Engineer's letter be forwarded to Government.

(*b*) That the abutment blocks ordered by the Secretary of State be commenced at once; but as they will not be ready for use for some months, that Government be asked to sanction their being placed in the position recommended by the Engineer, which is approved by the Board, as otherwise the work at the north pier will have to be stopped.

(*c*) The Board consider it would be very unsafe to leave, without wavebreaker protection, that portion of the north pier which was most injured before, and they therefore invite the serious attention of Government to the remarks made by their Engineer with reference to that portion of para. 4 of the G.O.

(*d*) Resolved further that the Chairman be invited to address Government and point out that, as both questions demand an immediate decision, it is hoped that orders may be passed as early as possible.

* * * *

(True Extract.)

(Signed) C. PINSENT,
Secretary, Harbour Trust Board.

From A. L. POGSON, Esq., Engineer, Harbour Trust Board, to the Chairman, Harbour Trust Board, dated Madras, 8th March 1889, No. 1558.

I have the honor to acknowledge the receipt of G.O., No. 622 W., dated 2nd March 1889, bearing your endorsement No. 851.

2. With regard to para. 2 of the order thereon, I beg to state that I am preparing to make the abutment blocks, but it is impossible to have them ready and hard enough in time to set this season; consequently construction at the north pier will have to be stopped earlier than otherwise necessary; but if it can be decided that the abutment should be "set" in a position so as to admit of as much progress this season as possible, I propose to place it at the *end of the curve* as shown on accompanying tracing of plan A, as all the curve blocks are made, and Mr. Parkes was aware of this, so that I believe his own reason for leaving the fixing of the exact position of the proposed abutment to me was so that I could utilize all the curve blocks already made and on hand. Under these circumstances, I have to ask that the trustees will approve of the above proposal whether or not orders are received to set this abutment early next working season.

3. This position of the abutment will not in any way interfere with the general scheme of plan A should it eventually be adopted, and will not only admit of greater progress this season, but utilize all the specially-made blocks now on hand, which will not work in at any other part of the harbour walls.

4. As to para. 4 of the same order, I can only state that I fear the north pier would be breached should a cylone of any importance strike Madras, while this portion of the pier is unprotected with wavebreakers as the old wall is so damaged at this point as to afford very little protection to the new work, especially as both the curves were damaged more severely than any other portion of the works.

5. Further that as (shown on accompanying plan) 346 feet of the 500 feet entrance had already been protected with wavebreaker blocks before the entrance, question arose for the second time, and that as these will have to be dredged up if this entrance is to be carried out, it will make very little difference whether the wavebreakers have to be raised *all along* this entrance; while, with a portion unprotected and possibly breached, the cost of rebuilding this injured new work would exceed the cost of removing the wavebreakers, I am now prohibited from putting down which, I am sure, *Mr Parkes never intended to be left unprotected*, and which is a distinct departure from the sanctioned design.

6. This question of protection requires a decisive decision *before* the 1st of April.

7. In my letter No. 909, dated 1st October 1888, para. 27, I proposed to leave the last 500 feet of the north pier unprotected with wavebreakers, and I fear this suggestion has led to the proposed deviation from the sanctioned design at the north pier curve, but I must here point out that there can be no comparison made between these two points, viz., the old north pier head and the north pier curve. The former is standing intact to mean sea level, and will be a strong wavebreaker in itself, while at the latter the old wall has been overthrown down to the lower blocks, so that the new work would have to stand the *full force* of the sea, just as the original section was expected to, but which so utterly failed.

8. This morning I went down myself in a diving dress and examined the old and ruined north pier; and from what I saw, I consider the north pier curve would be *positively unsafe* unless protected with a wavebreaker *not less than* 28 *feet wide*; and unless this protection is allowed to be added, I must ask that the trustees will give me a clear certificate acquitting me of all blame and responsibility should this pier be damaged during any cyclone.

9. If the trustees are prepared to accept the risk of further damage to the superstructure at this corner of the harbour, I would then *beg* that I may be *allowed* to "set" the wavebreaker blocks with Lewises, leaning against the north side of the wall, in single file, five courses deep, which will add 9 feet to the width of the superstructure. These blocks so "set" can be taken up whole and uninjured just as the superstructure will have to be, should Mr. Parkes' plan A eventually be adopted, but I cannot recommend this alteration.

Transferred to the Public Works Department.

(By order.)

(Signed) W. S. MEYER,
Ag. Under-Secretary.

14th March 1889.

821

Note by the Chief Engineer, Public Works Department, dated Madras, 16th March 1889.

There are two points brought forward in the papers forwarded by the Chairman of the Harbour Trust Board—

(1) The length of the extension of the north pier that may be proceeded with now.

(2) Whether this extension should be left for the present without the protection of wavebreaker blocks.

2. With regard to the first point, I see no objection whatever to Mr. Pogson's proposal that the north pier should be continued as far as the end of the curve, that is, to 2,858 feet from the starting point of the north pier. This is the spot where, should the abutment blocks (ordered to be made) be put down, they will probably be placed so as to form the root for the extension of the pier northwards forming the overlap of the entrance, should hereafter the late Mr. Parkes' proposal be carried out.

3. The second point is more difficult to decide, but the following are the facts of the case. The north pier was completed up to 2,526 feet from the starting point by December 1886, and this length has been protected with wavebreaking blocks. The north pier work was resumed on the 1st February 1889, and by the 9th March was completed up to 2,715 feet. This work is now going on and it is proposed to extend it to the end of the curve or to 2,858 feet. Should plan I of the proposals considered by the London Committee or any modification of it be hereafter adopted, it will be necessary to remove all the work put down from 2,180 feet to 2,858 feet, and of course the removal of the wavebreaker blocks in this portion of the work will be a most serious undertaking. We shall have (if this entrance is adopted) in any case to remove them for 346 feet (that is, from 2,180 to 2,526 feet) as they are already put down, but it was considered advisable in the case of this form of entrance being ordered not to place wavebreaker blocks for 332 feet, that is, from 2,526 to 2,858, and it was believed from the plans that the remains of the old north pier ruined in the cyclone of November 1881 would be sufficient protection for this length of new pier, and Government directed that wavebreaker blocks should not be put down.

4. Mr. Pogson, the Engineer for the Harbour Trust Board, reports in para. 7 of his letter that at the curve "the old wall has been overthrown down to the lower blocks," and that therefore little or no protection can be hoped for from it. This is not as shown in plans, where it is stated that on the worst place in the curve there are "two courses gone at least."

5. This morning I met Mr. Pogson and went over the north pier work with him, and after inspection I agree with that officer that it is advisable that this portion of the pier wall should not be left in May when cyclones are not unusual without protection, and therefore I recommend in place of, as proposed by Mr. Pogson, one row of wavebreaker blocks being "set" with Lewises on the north side of the wall, that two rows should so be placed, and, as stated by that officer, "these blocks so 'set' can be taken up whole and uninjured just as the superstructure will have to be," should plan I or any modification of it be adopted.

6. Should it be finally determined that this plan be not adopted (and I trust before long a final decision will be arrived at), it will be advisable for the upper courses of these wavebreaker blocks to be taken up and placed in "Random." Also that additional wavebreaker blocks be put down and the 28 feet of wavebreaker protection be completed before the north-eastern monsoon, say before the 15th October 1889. I therefore propose that the Madras Harbour Trust Board be authorised and requested as soon as practicable to place two rows of wavebreaker blocks on the north side of the extension of the north pier beyond, where it is already protected by the 28 feet width of wavebreakers, and to extend the north pier as far as they can this season with this protection, but that it should not be carried on beyond the end of the curve until the question of putting down the abutment is settled. There is a further reason for this proposal, namely, that space for the storage of wavebreaker blocks is wanted, and it is therefore of importance that the wavebreaker blocks that are ready for use (three months old) should be moved from the ground and the space now occupied by them be made available for new blocks.

2

ORDER—dated 19th March 1889, No. 821 W., Public Works.

The note by the Chief Engineer is forwarded for information to the Harbour Trust Board, and they are authorised to carry on the north pier as far as they can this season with the protection as proposed.

(True Extract.)

Captain, R.E.,
Under-Secy. to Govt., P.W.D.

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

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1889} Madras.

PUBLIC WORKS.

Dated March, 19th.

Recd. *Encl.*

G.O., 19th Mar. 1889, No. 821 W.

MARCH.

Madras Harbour Works

Note by the Chief Engineer, Public Works Department, on the subject of continuing the north pier with protective works, communicated to the Harbour Trust Board.

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821 W

(821)

Harbour Trust Board Office,
Madras, 12th March 1889.

No. 969

1P

From
R. W. Barlow Esquire C.S
Chairman, Harbour Trust Board,
Madras,

821

To
The Honorable J. F. Price C.S
Chief Secretary to Government,
Marine Department.
Fort Saint George

Sir

I have the honour to acknowledge the receipt of G. O. No. 622 W dated 2nd instant, and to submit herewith for the information of Government, copy of resolution passed thereon by the Board at their last meeting, together with a copy of their Engineers letter No. 1558 dated 8th instant referred to therein, also the tracing which was not received until today, hence the delay in transmitting the resolution. 5

The very early orders of Government are solicited as the

Trustees consider it is unsafe to leave the newly built portion of the North Pier unprotected, and are of opinion that it would be better to proceed according to the sanctioned design, which their Engineer informs them was, he believes, Mr. Parkes' intention.

I have the honour to be
Sir
Your most obedient servant

Chairman
Harbour Trust Board

Recd

---

821 Enclo

XTRACT of Proceedings of the TRUSTEES of the HARBOUR of MADRAS, at a Meeting held at the Offices of the Board on Friday the 8th day of March 1889.

x x x x

8 Read G.O. No. 622 W dated 2nd March 1889, passing orders on correspondence relating to proposals, for completing the Madras Harbour.

Read minutes by Captain H.A. Street H.M. I.M., Mr. J. B. Hanna M.I.C.E. and the Chairman

Read letter from the Engineer Harbour Trust Board No. 1558 dated 8th March in reply to a reference made to him on the subject.

Resolved, (a) that the Engineers' letter be forwarded to Government;

(b) that the abutment blocks ordered by the Secretary of State be commenced at once; but as they will not be ready for use for some months that Government be asked to sanction their being placed in the position recommended by the Engineer, which is appro the Board, as otherwise the work at the North Pier will have to be stopped.

(c) The Board consider it would be very unsafe to leave, without wavebreaker protection, that portion of the North Pier which was not injured before and they therefore invite the serious attention of Government to the remarks made by their Engineer with reference to that portion of para ~~3~~ 4 of the G.O.

(d) Resolved further that the Chairman be invited to address Government, and point out that as both questions demand an immediate decision, it is hoped that orders may be passed as early as possible.

(True Extract)

C Vincent

Secretary
Harbour Trust Board

No. 1558

621 3 pp

From

The Engineer
Harbour Trust Board
Madras

To

The Chairman
Harbour Trust Board
Madras

621 Madras 8th March 1889.

Sir,

I have the honor to acknowledge the receipt of G.O. No. 622 W dated 2d March 1889, bearing your endorsement No. 851.

2. With regard to para 2 of the order thereon, I beg to state that I am preparing to make the abutment blocks, but it is impossible to have them ready and hard enough in time, to set this season; Consequen construction at the North Pier will have to be stopped earlier than otherwise necessary; but if it can be decided that the abutment should be "set" in a position so as to admit of as much progress this season as possible. I propose to place it at the end of the curve as shown on accompanying tracing of plan A,

As all the curve blocks are made, and Mr.
Parkes was aware of this, so that I believe
his own reason for leaving the fixing of the
exact position of the proposed abutment
to me, was so that I could utilize all the
curve blocks already made and on hand.
Under these circumstances I have to ask that
the Trustees will approve of the above proposal
whether or not orders are received to set
this abutment early next working season.

3. This position of the abutment will not
in any way interfere with the general
scheme of plan A should it eventually be
adopted and will not only admit of
greater progress this season, but utilize all the
specially made blocks now on hand, which
will not work in at any other part of the Harbour
walls.

4. As to para 4 of the same order I can
only state that I fear the North Pier would
be breached should a cyclone of any importance
strike Madras, while this portion of the Pier
is unprotected with wave-breakers as the old
wall is so damaged at this point as to afford
very little protection to the new work especially
as both the curves were damaged more severely

Than

---

than any other portion of the works.

5. Further that as (shown on accompany-
-ing plan) 346 feet of the 500 feet Entrance
had already been protected with wave-breaker
blocks before the Entrance, question arose for
the second time, and that as there will have
to be dredged up if this Entrance is the carried
out, it will make very little difference whether
the wave breakers have to be raised all along
this Entrance; while, with a portion unprotect-
-ed and possibly breached, the cost of rebuild-
-ing this injured new work would exceed the
cost of removing the wave breakers, I am nor
prohibited from putting down which I am sur
Mr. Parkes never intended to be left unprotect
-ed, and which is a distinct departure from
the Sanctioned design.

8 8

6. This question of protection requires a
decisive decision before the 1st of April.

7. In my letter No. 909 dated 1st October
1888, paragraph 27, I proposed to leave the
last 500 feet of the North Pier unprotected
with wave breakers and I fear this suggestion
has led to the proposed deviation from

8

the sanctioned Design at the North Pier curve, but I must here point out that there can be no comparison made between these two points, viz the old North Pier Head and the North Pier Curve. The former is standing intact to Mean Sea Level, and will be a strong wave breaker in itself, — while at the latter, the old wall has been overthrown down to the lower blocks, so that the new work would have to stand the full force of the sea, just as the original section was expected to, but which so utterly failed.

8. This morning I went down myself in a diving dress, and examined the old and ruined North Pier; and from what I saw, I consider the North Pier Curve would be positively unsafe unless protected with a wave-breaker not less than 28 feet wide; and unless this protection is allowed to be added, I must ask that the Trustees will give me a clear certificate acquitting me of all blame and responsibility should this Pier be damaged during any cyclone.

821 5-5P

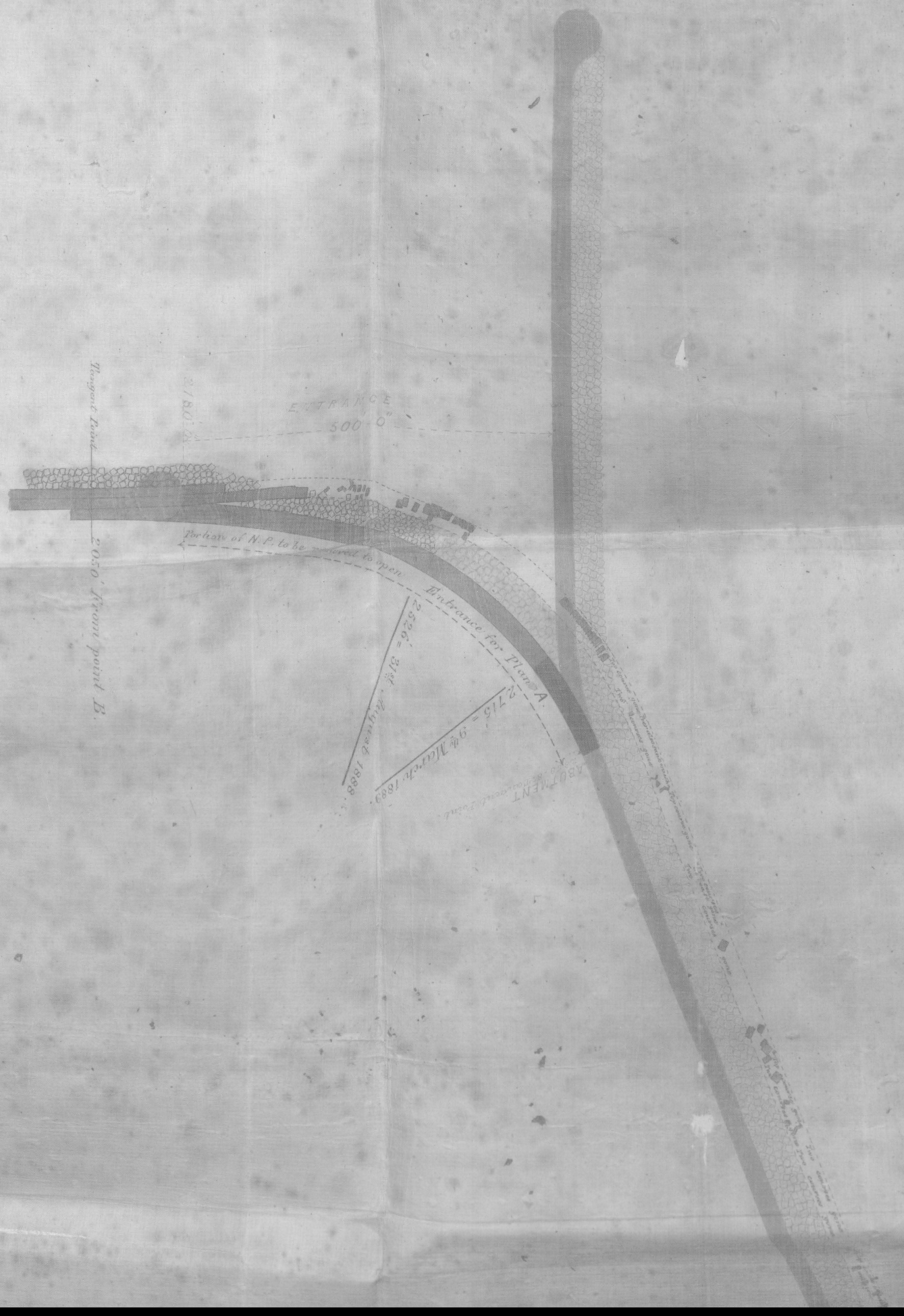
9. If the Trustees are prepared to accept the risk of further damage to the Superstructure at this ~~curve~~ corner of the Harbour I would then beg, that I may be allowed to "set" the wave-breaker blocks with Lewises, leaning against the North side of the wall, in single file, 5 courses deep, which will add 9 feet to the width of the superstructure. These blocks so "set" can be taken up whole and uninjured just as the Superstructure will have to be, should Mr. Parkes' Plan A eventu be adopted, but I cannot recommend this alteration.

I have the honor to be
Sir
Your most obdt. Servant
(Signed) A. Lee Pogson
Engineer Harbour Trust Board

9

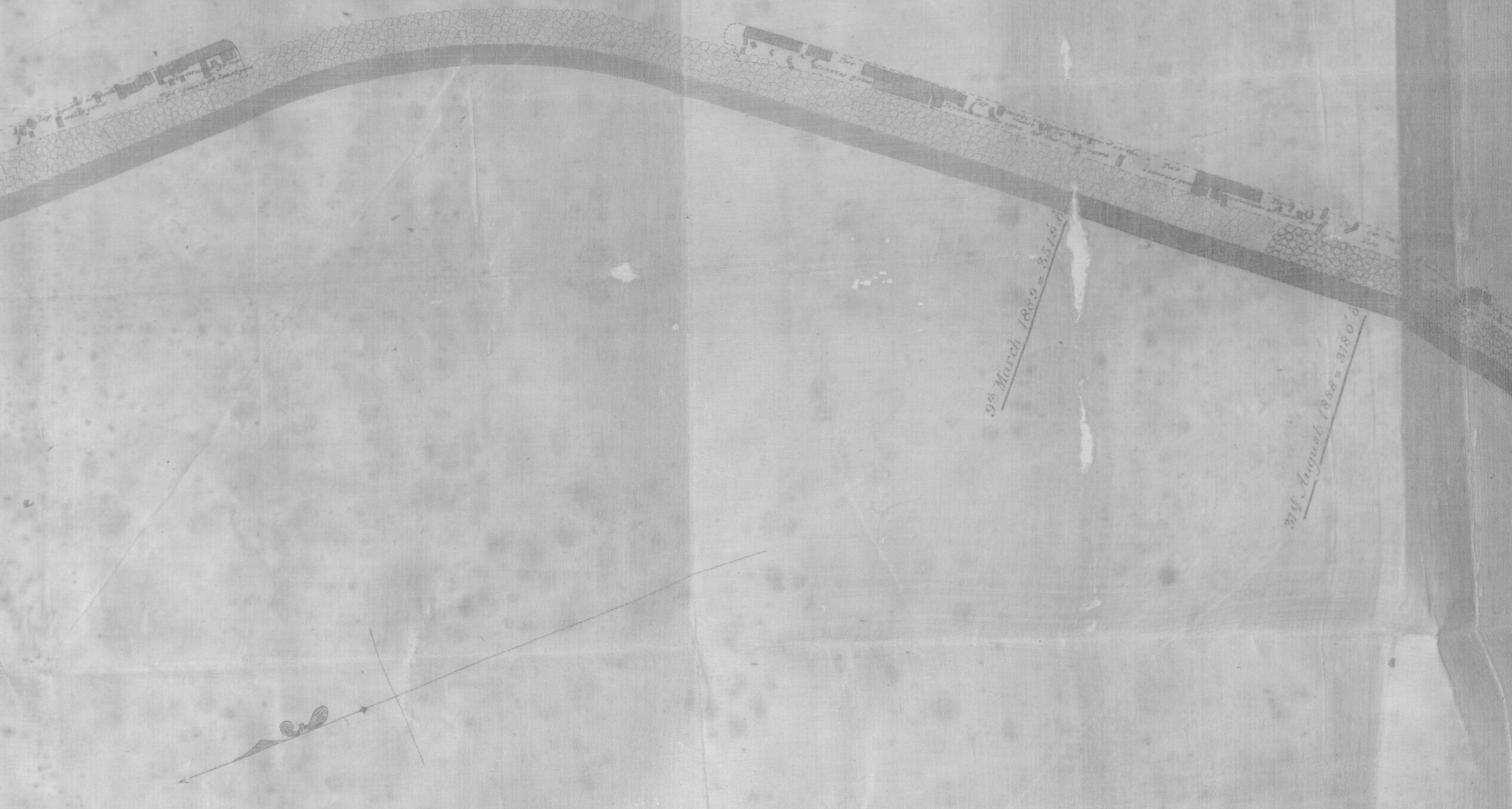
(True copy)

C Vincent
Secretary
Harbour Trust Board


Tangent Point
2050' from point B.
2180' 0"
ENTRANCE
500' 0"
Portion of N.P. to be removed to open
Entrance for Plan A.
2526' = 31st August 1888
2715' = 9th March 1889
ABUTMENT
Pl
accou

MADRAS HARBOUR WORKS

n A. accompanying Superintendents letter No. 1558.

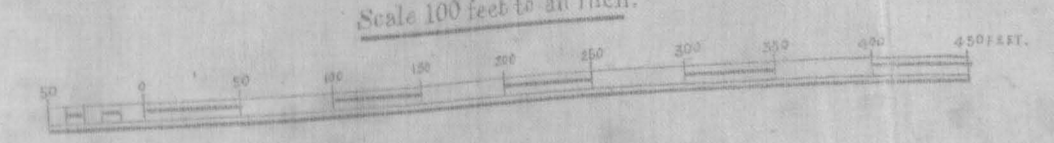


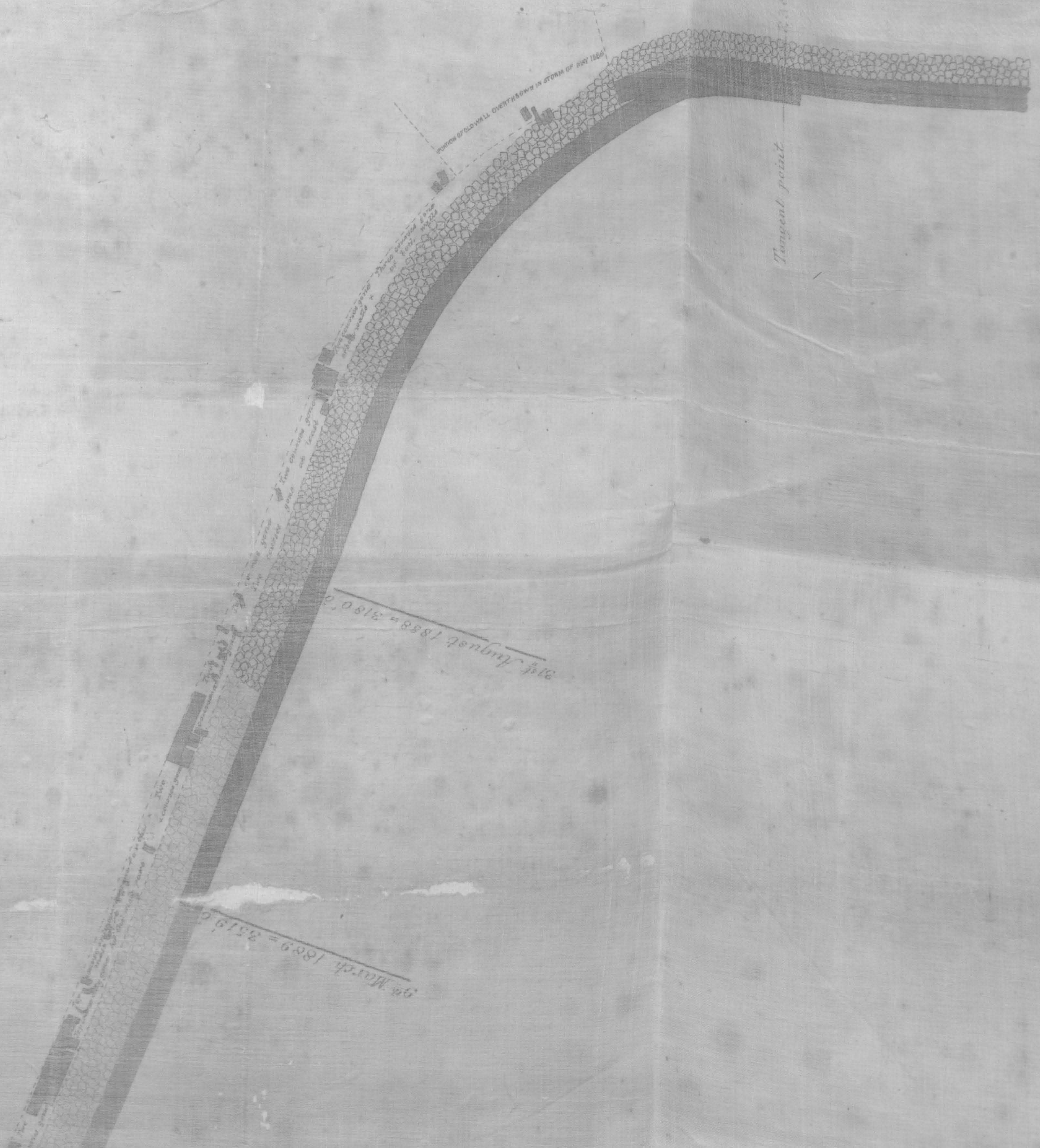
Note.

- ▬ Neutral tint shows progress upto 9th March 89 (Sanctioned Design)
- ▬ Blue shows portion of Pier to be built to complete curve.
- ▬ Red shows Plan A.
- ▬ Yellow shows portion of Pier ordered to be left unprotected with Wave breaker blocks,

Vide – G.O. No. 622 W. dated 2nd March 89, para No. 4.

Scale 100 feet to an inch.




PORTION OF OLD WALL OVERTHROWN IN STORM OF MAY 1886
Tangent point
31st August 1888 = 3190'0"
9th March 1889 = 3519.6

Engineer
Harbour Trust Board.

12.3.89

to decide but the following are the facts of the case. The North pier was completed up to 2526 feet from the starting point by December 1886, and this length has been protected with wave breaking blocks. The North pier work was resumed on the 1st February 1889 and by the 9th March was completed up to 2715 feet. This work is now going on and it is proposed to extend it to the end of the curve or to 2858 feet. Should plan I of the proposals considered by the London Committee or any modification of it be hereafter adopted it will be necessary to remove all the work put down from 2180 feet to 2858 feet and of course the removal of the wave breaker blocks in this portion of the work will be a most serious undertaking. We shall have (if this entrance is adopted) in any case to remove them for 346 feet (that is from 2180 to 2526 feet) as they are already put down, but it was considered advisable in the case of this form of entrance being ordered not to place wave breaker blocks for 332 feet that is from 2526 to 2858, and it was believed from the plans

that

that the remains of the old North Pier ruined in the Cyclone of Novr 1881 would be sufficient protection for this length of new pier, and Government directed that wave breaker blocks should not be put down.

4. Mr. Pogson the Engineer for the Harbour Board Trust reports in para 7 of his letter that at the curve "the old wall has "been over thrown down to the lower "blocks" and that therefore little or no protection can be hoped for from it. This is not as shown in plans where it is stated that in the worst place in the curve there are "2 courses gone at least".

5. This morning I met Mr. Pogson and went over the North pier work with him and after inspection I agree with that officer that it is advisable that this portion of the pier wall should not be left in May when Cyclones are not unusual without protection, and therefore I recommend in place of,, as proposed by Mr. Pogson, 1 row of wave breaker blocks being "set" with Lewises on the North side of the wall, that 2 rows should so be placed, and as stated by that officer

there

these blocks as "set" can be taken up whole and uninjured just as the "superstructure will have to be." should plan I or any modification of it be adopted.

6. Should it be finally determined that this plan be not adopted (and I ~~think~~ trust before long a final decision will be arrived at) it will be advisable for the upper courses of these wave breaker blocks to be taken up and placed in "Random." Also that additional wave breaker blocks be put down and the 28 feet of wave breaker protection be completed before the North Eastern Monsoon say before the 15th October 1889. I therefore propose that the Madras Harbour Board Trust be authorised and requested as soon as practicable to place 2 rows of wave breaker blocks on the North side of the extension of the North pier beyond, where it is already protected by the 28 feet width of wave breakers, and to extend the North pier as far as they can this season with this protection, but that it should not be carried on beyond the ~~east~~

~~east~~ end of the curve until the question of putting down the abutment is settled. There is a further reason for this proposal, namely that space for the storage of wave breaker blocks is wanted and it is therefore of importance that the wave breaker blocks that are ready for use (3 months old) should be moved from the ground and the space now occupied by them be made available for new blocks.

821

WM
15.3.89

Madras,
March 16, 1889 }

EW

18/3/89

13

(62)

Nth Protection Harbour
16th March

Scarf break in the bank at root of pier where the pier protection in blocks begins

There has nothing been done since April 87 to the North pier until Jan 89

In Dec 88 & Jan 89 some broken blocks were put down to strengthen the protection in the straight portion this was necessary and is not in the place which if the Pilots extension is made would have to be taken up

The site at 2059 to the abutment is without question the worst one and therefore here 9th March there is 144 ft to be done this at 5 ft per day will be reached 9th April

~~Aft~~ Titans are taken back and turned by 30th April then work stops on say 23rd April

When timbers can be dressed at the rate of 20 ft per day

If set 10 ft per day

Rubble base is all down but if some timber are set a little more would be required

Work recommenced about 15th June

(15

Rubble core N & S
Pier is done except
a bit at the ends

Abutment blocks will
be ready by say 15th July
this if they are put down
will involve nearly a
months delay

There entering in a
wave plane at the
end of present wave breaker
protection at end of North
Pier and it is advisable
that it should be strengthened
this could be done by
2 rows of wave breaker
blocks being set (not
these done random)
and if this is done the
question of taking ~~them~~ pier extension up
again (if necessary) could
be much reduced
there is the old work in
hand and will soon
rubble put down this
could be done probably at
the rate of 10 ft per day
The few blocks for the
14 2/3 ft to be done could
be done by 9th April

144
189
333

14 days added this to
setting blocks wave breakers
is 23rd April therefore this
would could be done by
the time the Titan was to
be brought back
If this portion of pier were set
to be taken up then blocks
wave breakers will have to be
taken up a some of them
set placed random

Mr Pegson says that he
has ~~no~~ not shown sufficient
~~Ae~~ in his yard for W Breakers
and is therefore anxious to
get them off
He is making them as fast
as he has ~~made~~ yard room
for his work and therefore
is anxious to make use
them as quickly as possible
this is an additional reason
for the ~~Ad~~ W Blocks being
put down in the 142 ft
~~L~~ By July the question
of extension ought to be
finally settled and should
it be decided that the
Pier extension be ~~carried~~
round the curve shown
of the N Pier and be curbed
there will be no difficulty in
taking up the 32ft W Breakers
and placing them in random
~~strength~~ be making and the

~~2~~8 with 28 the
width of wave breaker
that can be done by
the Titan. This ought
to be done by the
new masonry.

---

when cyclones are
unusual without [illegible]
protection
I recommend
of as followed by
1 Row of wave [illegible]
blocks being "set" with
Lewises on the [illegible]
side of the wall that
2 Rows sh^d as be placed
and as stated by that
Minute "these blocks
" "set" can be [illegible]
" which and [illegible]
" just as
" with [illegible]
Plan I
if it be [illegible]
6 Sh^d as it be
determined that
plan be not accepted
(and I trust before the
long in final decision
will be arrived at)
it will be advisable for
the upper corners of these
wave breaker blocks to be
taken up and placed in
"Random" also that
additional Wave breaker
blocks be put down and

were broken

committed

V.E. Dunsan

c 15 Oct 89

~~fullness~~

broken that

the [illegible] Harbour

Board that he authorized

and requested as soon

take the place

were broken

North

in

and

is

the

Weir

and it

North bank

as soon as they can

this season with this

protection, but that it

should not be carried on

beyond the end of the

coming until the question

of putting down the

Abutment blocks is

settled.

There is a further reason

for this partial remedy

There is 144 ft to the ~~the~~

western side of abutment

(if laid down)

Rate of progress made 821

5 ft per day

therefore this is 29 days

say 30 days.

that 9th March + 30 days

say 9th April

wave breaker
completed

Progress North Line

Aug 88
Surf bank nothing done
since 31st Dec 86

Rubble base } nothing done
Superstructure } since 30th April 87

Sept 88 ~~at~~ as above

Telegram to Resume Harbour Works
and further abutment blocks
dated 24th Dec
GO communicating No 174 W
dated 22nd Jan 89

Oct Progress Report
as above

Nov
~~North~~
Surf bank 245½ tons
Rubble base } as above
Superstructure }

Dec
Additional wave breaker blocks
put down
Surf bank nothing done since 30th Nov 88
Rubble base } as above
Superstructure } nothing done since 30 April 87

Jany 76 - 30 Ton Wave breakers
blocks put down
along the inner straight of line
completing the Wave breaker to the
end of completed portion of line

North line was stopped 30 April 87
and resumed 1st Feb 89
to 9th March 189 ft was done that
in say 37 days

From Progress Reports
Surf bank ?
nothing done since 31st Dec 86
Rubble base } nothing done
Superstructure } since 30 April
87

In Nov 88
821
245½ tons surf bank
put down

In Dec 88
some additional
wave breaker blocks were
put down

In Jany 89
76 - 30 ton Wave breaker
blocks put down
along inner straight of line
completing the wave breaker
to the end of the completed
portion of line

North line was stopped
30 April 87 and
resumed 1st Feb 89
18
By 9th March 189 ft were
done in say 35 days or
say 5 ft per day
There is 144 ft to the
landward side of abutment
~~it that do~~
say 30 days work
18

root for the extension

wave breaker
completed

Want to know
When is it necessary
to strike back Wavebreaker
and when can work be
resumed —

At what rate per day
can the 20 ft of wave-
-breaker protection be laid
down

Is the Rubble base
ready for the whole of
North here or if not
for how great a length

When will abutment blocks
be ready for use

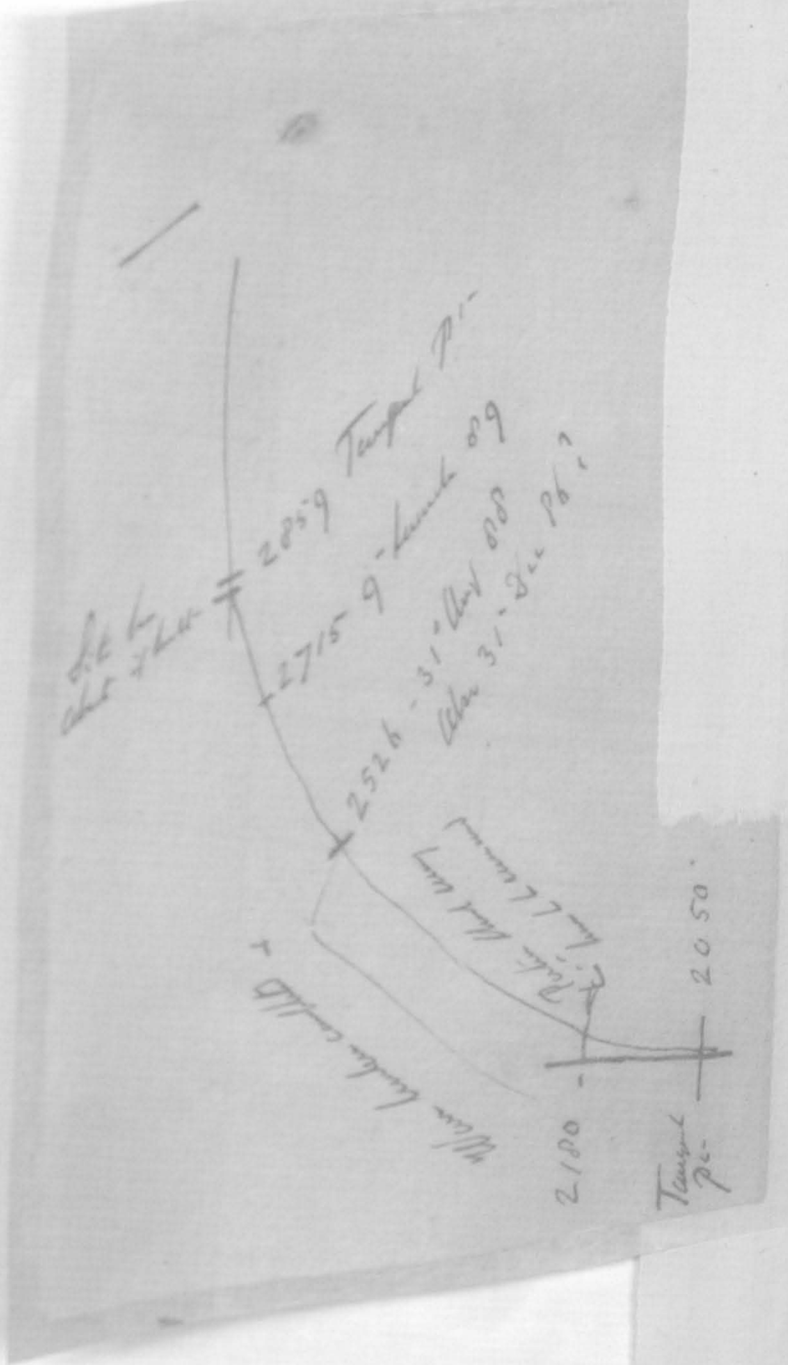
Mr Parkes says there will be
about 250 ft to build beyond
completed end (@ 2526
that is to 2776) - up
to site for abutment blocks
This appears to be an error
The allowance for this say 50 days
on the rate of 5 ft per day as before
Mr Parkes says 3 months to [illegible]

In Mr Pogson's Report he mentions
it appears that the section
proposed to be left without
protection is protected by the old
work in as good a state as
at the end of the [illegible] [illegible]
[illegible] is both come big "2 courses [illegible]

so as to [illegible]
root for the 1st extension

wave breaker
embedded?

Want to know
When is it necessary



Note by Ch. E.

There are 2 points brought
forward in the papers
forwarded by the Chairman
of the Harbour Board Trust-
1st The ~~position~~ length
of the extension of the
North pier that may
be proceeded with now
2nd Whether this extension
shd be left or be the present
without the protection of
Wave Breaker Blocks

2 With regard to the 1st point-
I see no objection whatever
to Mr Paysons proposal
that the North pier shd
be continued as far
as the end of the curve
that is to 2858 ft-
from the starting point
of the North pier
This is the ~~place~~ spot where
shd the abutment blocks
(ordered to be made) be
~~they are~~ be best decided they
will probably be placed
so as to form the
root for the extension

would be sufficient protection for the length of new ~~wall~~ line and Govt directed that wave breaker blocks sh^d not be put down

4 The Mr Pogson the Engineer to the Harbour Board Trust reports in para 7 of his letter that at the curve "the old wall has been" "undermined down to the" "stone blocks" and that timber piling is no protection can be looked for from it

This is not as shown in plans where it is stated ~~at~~ that on the worst place in the curve ~~there~~ there are "2 courses gone at least"

5 This morning I met Mr Pogson and went over the North line wall with him and ~~I~~ after inspection I agree with that officer that it is advisable that this portion of the sea wall sh^d not be left in long

that ~~the block ground~~ space for the storage of wave breaker blocks is wanted and it is therefore of importance that the wave breaker blocks that are ready for use (3 months old) sh^d be moved from the ground and the space now occupied by them be made available for new blocks.

16/3/89

G 6

The Note of the Chf Engr is forwarded for information to the Harbour Trust Board and they are authorised to carry on the North line as far as they can this season with the protection as proposed.

A/

821

B & R
C works

PUBLIC WORKS DEPARTMENT.

101

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 19th [illegible]

READ the following

Letter from the Chairman M. H. T. Board Ae. No. 969 dated 12th March 1889.
Endorsement thereon in the Marine Dept. dated 14th March 1889.
Note by the Chief Engineer P. W. D. dated 16th March 1889.

The note by the Chief Engineer is forwarded for information to the Harbour Trust Board, and they are authorised to carry on the North pier as far as they can this season with the protection as proposed.

HCS
18 mar.

18.3.89

18/3/89

This is a technical point on which I think we must be guided by the Chief Engineer's opinion.

HES
18 mar.

C

24

Chairman M. H. T. Bd ✓ 19/3
Marine Dept. ✓ 19/3

13=9216.

Govt. of {1889} Madras.

PUBLIC WORKS.

Print soon

Dated

Recd. Encl.

G.O. 19 ~~March~~ March 1889 No. 821 W

Hbr. works

=

Note by the Ch. Engr., Pub. Dept., ~~for~~ on the subject of ~~the~~ continuing the North pier ~~& the~~ with ~~the~~ protective works, cons'd to the Harbour Trust Board.

(25)

17/3

19/3

(1) பக்கங்களின் எண்ணிக்கை 64
(2) புதுக்கித் திருப்பிய நாள் 23.2.89
(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

(38)

தமிழ்நாடு அரசு

P.W.D துறை

அரசாணை எண்.
மு. கோப்புத் தாள் எண். 821
அச்சகம்
பலவகை

நாள் : 19-3-1889 ~~188~~

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

25-Sheets 24+1

ஆவண, கா-1—18,008—15-6-87.

19TH MARCH 1889, No. 821 W., PUBLIC WORKS.

821

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From R. W. BARLOW, Esq., C.S., Chairman, Harbour Trust Board, to the Chief Secretary to Government, Marine Department, dated Madras, 12th March 1889, No. 969.

I have the honor to acknowledge the receipt of G.O., No. 622 W., dated 2nd instant, and to submit herewith, for the information of Government, copy of resolution passed thereon by the Board at their last meeting, together with a copy of their Engineer's letter No. 1558, dated 8th instant, referred to therein, also the tracing which was not received until to-day ; hence the delay in transmitting the resolution.

2. The very early orders of Government are solicited as the trustees consider it is unsafe to leave the newly built portion of the north pier unprotected, and are of opinion that it would be better to proceed according to the sanctioned design, which their Engineer informs them was, he believes, Mr. Parkes' intention.

ENCLOSURES.

EXTRACT of Proceedings of the Trustees of the Harbour of Madras, at a Meeting held at the offices of the Board on Friday the 8th day of March 1889.

* * * *

8. Read G.O., No. 622 W., dated 2nd March 1889, passing orders on correspondence relating to proposals for completing the Madras Harbour.

Read minutes by Captain H. A. Street, H.M.'s I.M., Mr. F. B. Hanna, M.I.C.E., and the Chairman.

Read letter from the Engineer, Harbour Trust Board, No. 1558, dated 8th March, in reply to a reference made to him on the subject.

Resolved (*a*) that the Engineer's letter be forwarded to Government.

(*b*) That the abutment blocks ordered by the Secretary of State be commenced at once; but as they will not be ready for use for some months, that Government be asked to sanction their being placed in the position recommended by the Engineer, which is approved by the Board, as otherwise the work at the north pier will have to be stopped.

(*c*) The Board consider it would be very unsafe to leave, without wavebreaker protection, that portion of the north pier which was most injured before, and they therefore invite the serious attention of Government to the remarks made by their Engineer with reference to that portion of para. 4 of the G.O.

(*d*) Resolved further that the Chairman be invited to address Government and point out that, as both questions demand an immediate decision, it is hoped that orders may be passed as early as possible.

* * * *

(True Extract.)

(Signed) C. PINSENT,
Secretary, Harbour Trust Board.

From A. L. POGSON, Esq., Engineer, Harbour Trust Board, to the Chairman, Harbour Trust Board, dated Madras, 8th March 1889, No. 1558.

I have the honor to acknowledge the receipt of G.O., No. 622 W., dated 2nd March 1889, bearing your endorsement No. 851.

2. With regard to para. 2 of the order thereon, I beg to state that I am preparing to make the abutment blocks, but it is impossible to have them ready and hard enough in time to set this season; consequently construction at the north pier will have to be stopped earlier than otherwise necessary; but if it can be decided that the abutment should be "set" in a position so as to admit of as much progress this season as possible, I propose to place it at the *end of the curve* as shown on accompanying tracing of plan A, as all the curve blocks are made, and Mr. Parkes was aware of this, so that I believe his own reason for leaving the fixing of the exact position of the proposed abutment to me was so that I could utilize all the curve blocks already made and on hand. Under these circumstances, I have to ask that the trustees will approve of the above proposal whether or not orders are received to set this abutment early next working season.

3. This position of the abutment will not in any way interfere with the general scheme of plan A should it eventually be adopted, and will not only admit of greater progress this season, but utilize all the specially-made blocks now on hand, which will not work in at any other part of the harbour walls.

4. As to para. 4 of the same order, I can only state that I fear the north pier would be breached should a cylone of any importance strike Madras, while this portion of the pier is unprotected with wavebreakers as the old wall is so damaged at this point as to afford very little protection to the new work, especially as both the curves were damaged more severely than any other portion of the works.

5. Further that as (shown on accompanying plan) 346 feet of the 500 feet entrance had already been protected with wavebreaker blocks before the entrance, question arose for the second time, and that as these will have to be dredged up if this entrance is to be carried out, it will make very little difference whether the wavebreakers have to be raised *all along* this entrance; while, with a portion unprotected and possibly breached, the cost of rebuilding this injured new work would exceed the cost of removing the wavebreakers, I am now prohibited from putting down which, I am sure, *Mr Parkes never intended to be left unprotected*, and which is a distinct departure from the sanctioned design.

6. This question of protection requires a decisive decision *before* the 1st of April.

7. In my letter No. 909, dated 1st October 1888, para. 27, I proposed to leave the last 500 feet of the north pier unprotected with wavebreakers, and I fear this suggestion has led to the proposed deviation from the sanctioned design at the north pier curve, but I must here point out that there can be no comparison made between these two points, viz., the old north pier head and the north pier curve. The former is standing intact to mean sea level, and will be a strong wavebreaker in itself, while at the latter the old wall has been overthrown down to the lower blocks, so that the new work would have to stand the *full force* of the sea, just as the original section was expected to, but which so utterly failed.

8. This morning I went down myself in a diving dress and examined the old and ruined north pier; and from what I saw, I consider the north pier curve would be *positively unsafe* unless protected with a wavebreaker *not less than* 28 *feet wide*; and unless this protection is allowed to be added, I must ask that the trustees will give me a clear certificate acquitting me of all blame and responsibility should this pier be damaged during any cyclone.

9. If the trustees are prepared to accept the risk of further damage to the superstructure at this corner of the harbour, I would then *beg* that I may be *allowed* to "set" the wavebreaker blocks with Lewises, leaning against the north side of the wall, in single file, five courses deep, which will add 9 feet to the width of the superstructure. These blocks so "set" can be taken up whole and uninjured just as the superstructure will have to be, should Mr. Parkes' plan A eventually be adopted, but I cannot recommend this alteration.

Transferred to the Public Works Department.

(By order.)

(Signed) W. S. MEYER,
Ag. Under-Secretary.

14th March 1889.

821

Note by the Chief Engineer, Public Works Department, dated Madras, 16th March 1889.

There are two points brought forward in the papers forwarded by the Chairman of the Harbour Trust Board—

(1) The length of the extension of the north pier that may be proceeded with now.

(2) Whether this extension should be left for the present without the protection of wavebreaker blocks.

2. With regard to the first point, I see no objection whatever to Mr. Pogson's proposal that the north pier should be continued as far as the end of the curve, that is, to 2,858 feet from the starting point of the north pier. This is the spot where, should the abutment blocks (ordered to be made) be put down, they will probably be placed so as to form the root for the extension of the pier northwards forming the overlap of the entrance, should hereafter the late Mr. Parkes' proposal be carried out.

3. The second point is more difficult to decide, but the following are the facts of the case. The north pier was completed up to 2,526 feet from the starting point by December 1886, and this length has been protected with wavebreaking blocks. The north pier work was resumed on the 1st February 1889, and by the 9th March was completed up to 2,715 feet. This work is now going on and it is proposed to extend it to the end of the curve or to 2,858 feet. Should plan I of the proposals considered by the London Committee or any modification of it be hereafter adopted, it will be necessary to remove all the work put down from 2,180 feet to 2,858 feet, and of course the removal of the wavebreaker blocks in this portion of the work will be a most serious undertaking. We shall have (if this entrance is adopted) in any case to remove them for 346 feet (that is, from 2,180 to 2,526 feet) as they are already put down, but it was considered advisable in the case of this form of entrance being ordered not to place wavebreaker blocks for 332 feet, that is, from 2,526 to 2,858, and it was believed from the plans that the remains of the old north pier ruined in the cyclone of November 1881 would be sufficient protection for this length of new pier, and Government directed that wavebreaker blocks should not be put down.

4. Mr. Pogson, the Engineer for the Harbour Trust Board, reports in para. 7 of his letter that at the curve "the old wall has been overthrown down to the lower blocks," and that therefore little or no protection can be hoped for from it. This is not as shown in plans, where it is stated that on the worst place in the curve there are "two courses gone at least."

5. This morning I met Mr. Pogson and went over the north pier work with him, and after inspection I agree with that officer that it is advisable that this portion of the pier wall should not be left in May when cyclones are not unusual without protection, and therefore I recommend in place of, as proposed by Mr. Pogson, one row of wavebreaker blocks being "set" with Lewises on the north side of the wall, that two rows should so be placed, and, as stated by that officer, "these blocks so 'set' can be taken up whole and uninjured just as the superstructure will have to be," should plan I or any modification of it be adopted.

6. Should it be finally determined that this plan be not adopted (and I trust before long a final decision will be arrived at), it will be advisable for the upper courses of these wavebreaker blocks to be taken up and placed in "Random." Also that additional wavebreaker blocks be put down and the 28 feet of wavebreaker protection be completed before the north-eastern monsoon, say before the 15th October 1889. I therefore propose that the Madras Harbour Trust Board be authorised and requested as soon as practicable to place two rows of wavebreaker blocks on the north side of the extension of the north pier beyond, where it is already protected by the 28 feet width of wavebreakers, and to extend the north pier as far as they can this season with this protection, but that it should not be carried on beyond the end of the curve until the question of putting down the abutment is settled. There is a further reason for this proposal, namely, that space for the storage of wavebreaker blocks is wanted, and it is therefore of importance that the wavebreaker blocks that are ready for use (three months old) should be moved from the ground and the space now occupied by them be made available for new blocks.

ORDER—dated 19th March 1889, No. 821 W., Public Works.

The note by the Chief Engineer is forwarded for information to the Harbour Trust Board, and they are authorised to carry on the north pier as far as they can this season with the protection as proposed.

(True Extract.)

Captain, R.E.,
Under-Secy. to Govt., P.W.D.

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

Exd. J. Henricus.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1889} Madras.

PUBLIC WORKS.

Dated March, 19th.

Recd. *Encl.*

G.O., 19th Mar. 1889, No. 821 W.

MARCH.

Madras Harbour Works

Note by the Chief Engineer, Public Works Department, on the subject of continuing the north pier with protective works, communicated to the Harbour Trust Board.

No 821 W

(821)

Harbour Trust Board Office,
Madras, 12th March 1889.

No. 969

1P

From R. H. Barlow Esquire C.S.
CHAIRMAN, HARBOUR TRUST BOARD,
Madras,

821

To The Honorable J. F. Price C.S.
CHIEF SECRETARY TO GOVERNMENT,
Marine Department.
Fort Saint George

Sir

I have the honour to acknowledge the receipt of G. O. No 622 W dated 2nd instant, and to submit herewith for the information of Government, copy of resolution passed thereon by the Board at their last meeting, together with a copy of their Engineers letter No 1558 dated 8th instant referred to therein, also the tracing which was not received until to-day, hence the delay in transmitting the resolution.

5

The very early orders of Government are solicited as the

Trustees consider it is unsafe to leave the newly built portion of the North Pier unprotected, and are of opinion that it would be better to proceed according to the sanctioned design, which their Engineer informs them was, he believes, Mr Parkes' intention.

I have the honour to be
Sir
Your most obedient Servant

Chairman
Harbour Trust Board

Rec

EXTRACT of Proceedings of the TRUSTEES of the HARBOUR of MADRAS, at a Meeting held at the Offices of the Board on Friday the 8th day of March 1889.

8 Read G.O. No. 622 W dated 2nd March 1889, passing orders on correspondence relating to proposals, for completing the Madras Harbour.

Read minutes by Captain H.A. Street R.N. Ind, Mr D.B. Hanna M.I.C.E and the Chairman

Read letter from the Engineer Harbour Trust Board No. 1558 dated 8th March in reply to a reference made to him on the subject.

Resolved, (a) that the Engineer's letter be forwarded to Government;

(b) that the abutment blocks ordered by the Secretary of State be commenced at once; but as they will not be ready for use for some months that Government be asked to sanction their being placed in the position recommended by the Engineer, which is approv the Board, as otherwise the work at the North Pier will have to be stopped.

(c) The Board consider it would be very unsafe to leave, without wavebreaker protection, that portion of the North Pier which was not injured before and they therefore invite the serious attention of Government to the remarks made by their Engineer with reference to that portion of para ~~3~~ 4 of the G.O.

(d) Resolved further that the Chairman be invited to address Government, and point out that as both questions demand an immediate decision, it is hoped that orders may be passed as early as possible.

(True Extract)

C. Vincent

Secretary

Harbour Trust Board

No. 1558

821 3 pp

From

The Engineer

Harbour Trust Board

Madras

To

The Chairman

Harbour Trust Board

Madras

821 Madras 8th March 1889.

Sir,

I have the honor to acknowledge the receipt of G.O. No. 622 W dated 2nd March 1889, bearing your endorsement No. 851.

2. With regard to para 2 of the order thereon, I beg to state that I am preparing to make the abutment blocks, but it is impossible to have them ready and hard enough in time, to set this season; consequently construction at the North Pier will have to be stopped earlier than otherwise necessary, but if it can be decided that the abutment should be "set" in a position so as to admit of as much progress this season as possible. I propose to place it at the end of the curve as shown on accompanying tracing of plan A,

as all the curve blocks are made, and Mr. Parkes was aware of this, so that I believe his own reason for leaving the fixing of the exact position of the proposed abutment to me, was so that I could utilize all the curve blocks already made and on hand. Under these circumstances I have to ask that the Trustees will approve of the above proposal whether or not orders are received to set this abutment early next working season.

3. This position of the abutment will not in any way interfere with the general scheme of plan A should it eventually be adopted and will not only admit of greater progress this season, but utilize all the specially made blocks now on hand, which will not work in at any other part of the Harbour walls.

4. As to para 4 of the same order I can only state that I fear the North Pier would be breached should a cyclone of any importance strike Madras, while this portion of the Pier is unprotected with wave-breakers as the old wall is so damaged at this point as to afford very little protection to the new work Especially as both the curves were damaged more severely

Than

than any other portion of the works.

5. Further that as (shown on accompanying plan) 346 feet of the 500 feet Entrance had already been protected with wave-breaker blocks before the Entrance, Question arose for the second time, and that as these will have to be dredged up if this Entrance is the carried out, it will make very little difference whether the wave breakers have to be raised all along this Entrance; while, with a portion unprotected and possibly breached, the cost of rebuilding this injured new work would exceed the cost of removing the wave breakers, I am no prohibited from putting down which I am su Mr. Parkes never intended to be left unprotected, and which is a distinct departure from the Sanctioned design.

6. This question of protection requires a decisive decision before the 1st of April.

7. In my letter No. 909 dated 1st October 1888, paragraph 27, I proposed to leave the last 500 feet of the North Pier unprotected with wave breakers and I fear this suggestion has led to the proposed deviation from

the sanctioned design at the North Pier curve, but I must here point out that there can be no comparison made between these two points, viz the old North Pier Head and the North Pier Curve. The former is standing intact to Mean Sea Level, and will be a strong wave breaker in itself, — while at the latter, the old wall has been overthrown down to the lower blocks, so that the new work would have to stand the full force of the sea, just as the original section was expected to, but which so utterly failed.

8. This morning I went down myself in a diving dress, and examined the old and ruined North Pier; and from what I saw, I consider the North Pier Curve would be positively unsafe unless protected with a wave-breaker not less than 28 feet wide; and unless this protection is allowed to be added, I must ask that the Trustees will give me a clear certificate acquitting me of all blame and responsibility should this Pier be damaged during any cyclone.

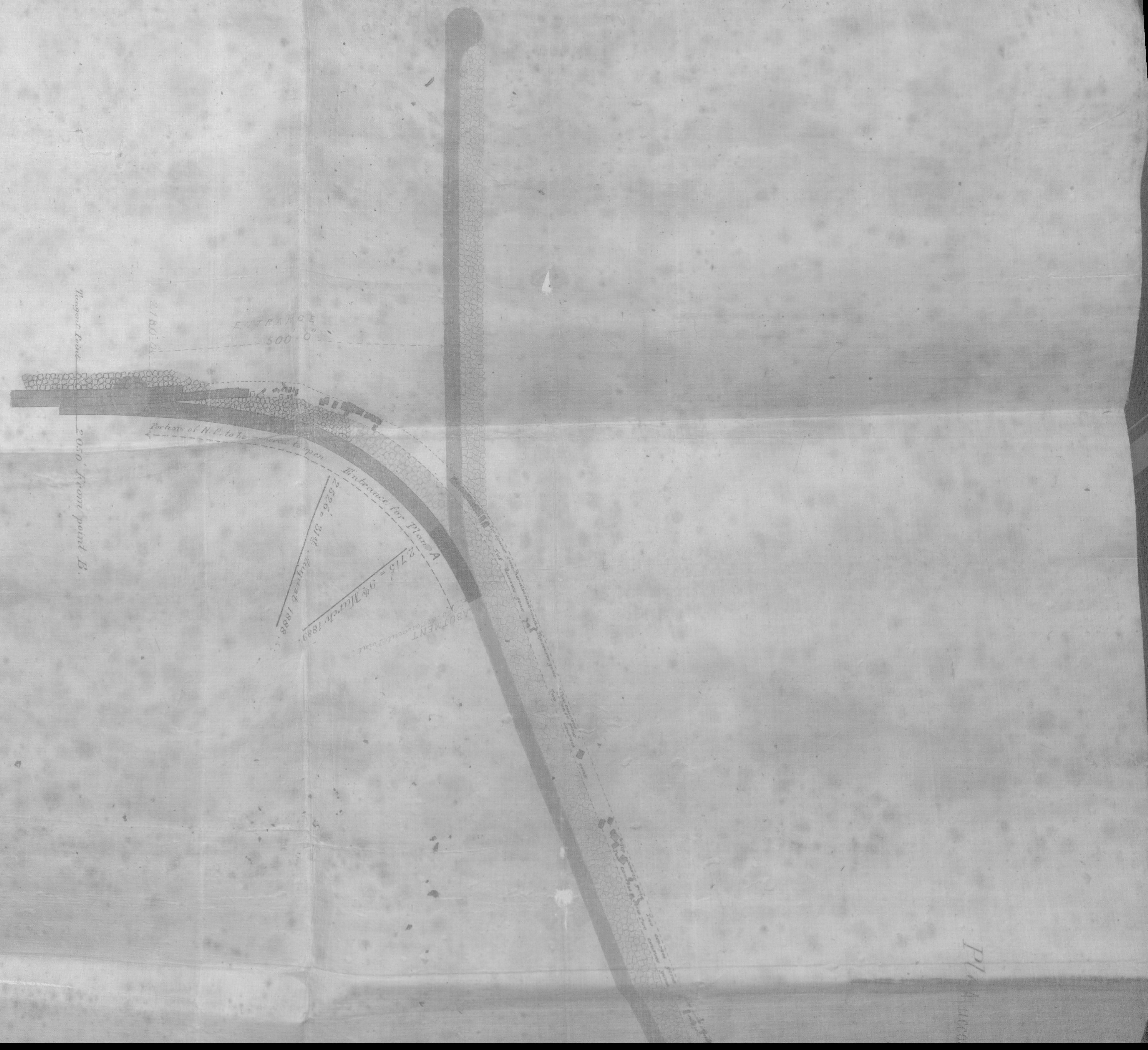
9. If the Trustees are prepared to accept the risk of further damage to the Superstructure at this ~~curve~~ corner of the Harbour I would then beg, that I may be allowed to "set" the wave-breaker blocks with Lewises, leaning against the North side of the wall, in single file, 5 courses deep, which will add 9 feet to the width of the superstructure. These blocks so "set" can be taken up whole and uninjured just as the superstructure will have to be, should Mr. Parkes' Plan A eventu be adopted, but I cannot recommend this alteration.

I have the honor to be
Sir
Your most obdt. Servant
(Signed) A. Lee Pogson
Engineer Harbour Trust Board

9

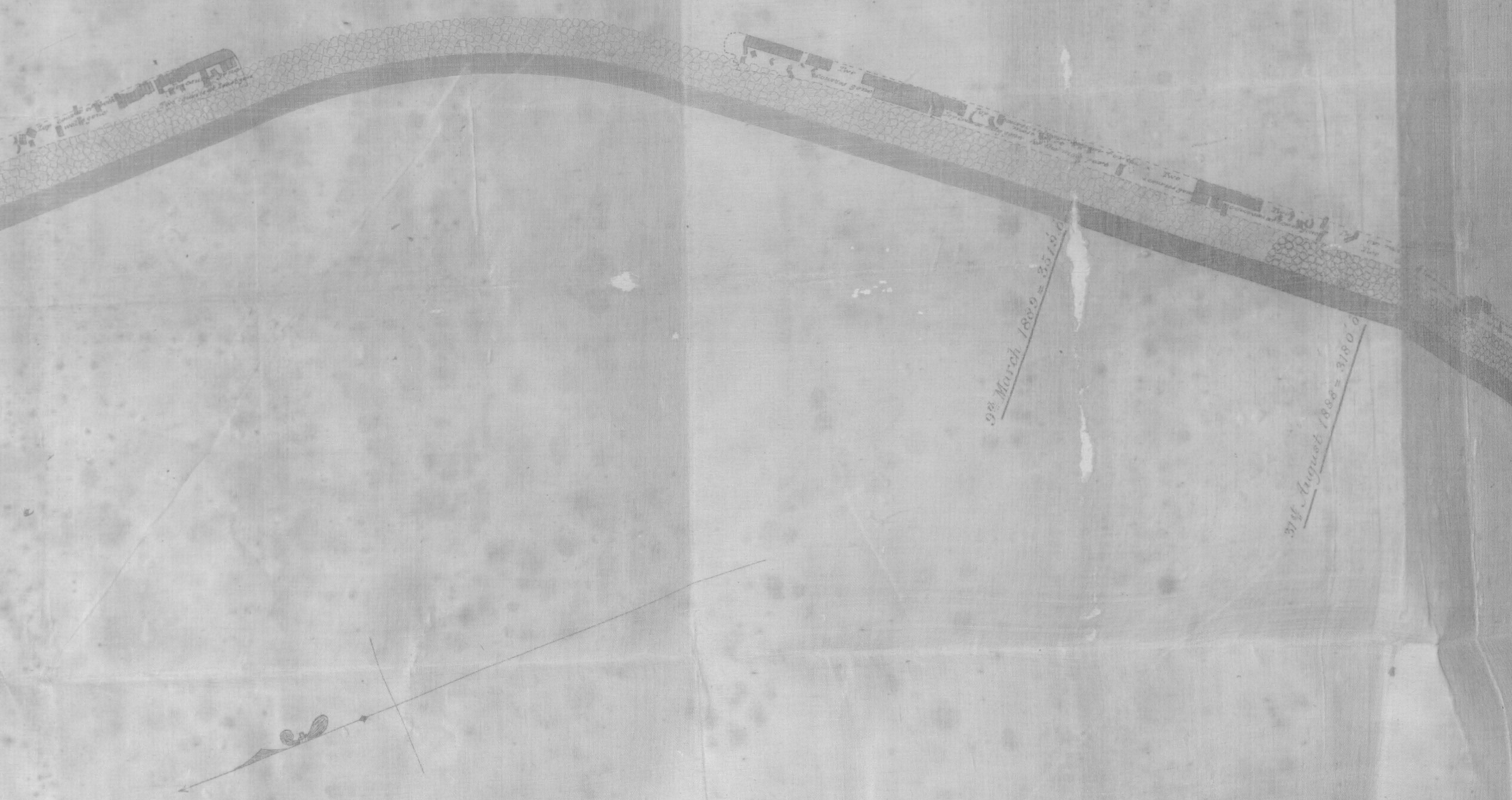
(True copy)

Secretary
Harbour Trust Board


Tangent Point
2050' from point B.
2180'0"
ENTRANCE
500'0"
Portion of N.P. to be removed to open
Entrance for Plan A.
2526' = 31st August 1888
2715' = 9th March 1889
ABUTMENT
Top course gone
Two courses gone
Top course gone
Two courses gone
Two courses gone
Pl

MADRAS HARBOUR WORKS

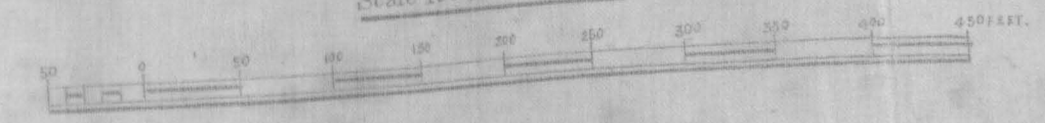
n A, accompanying Superintendents letter Nº 1558.

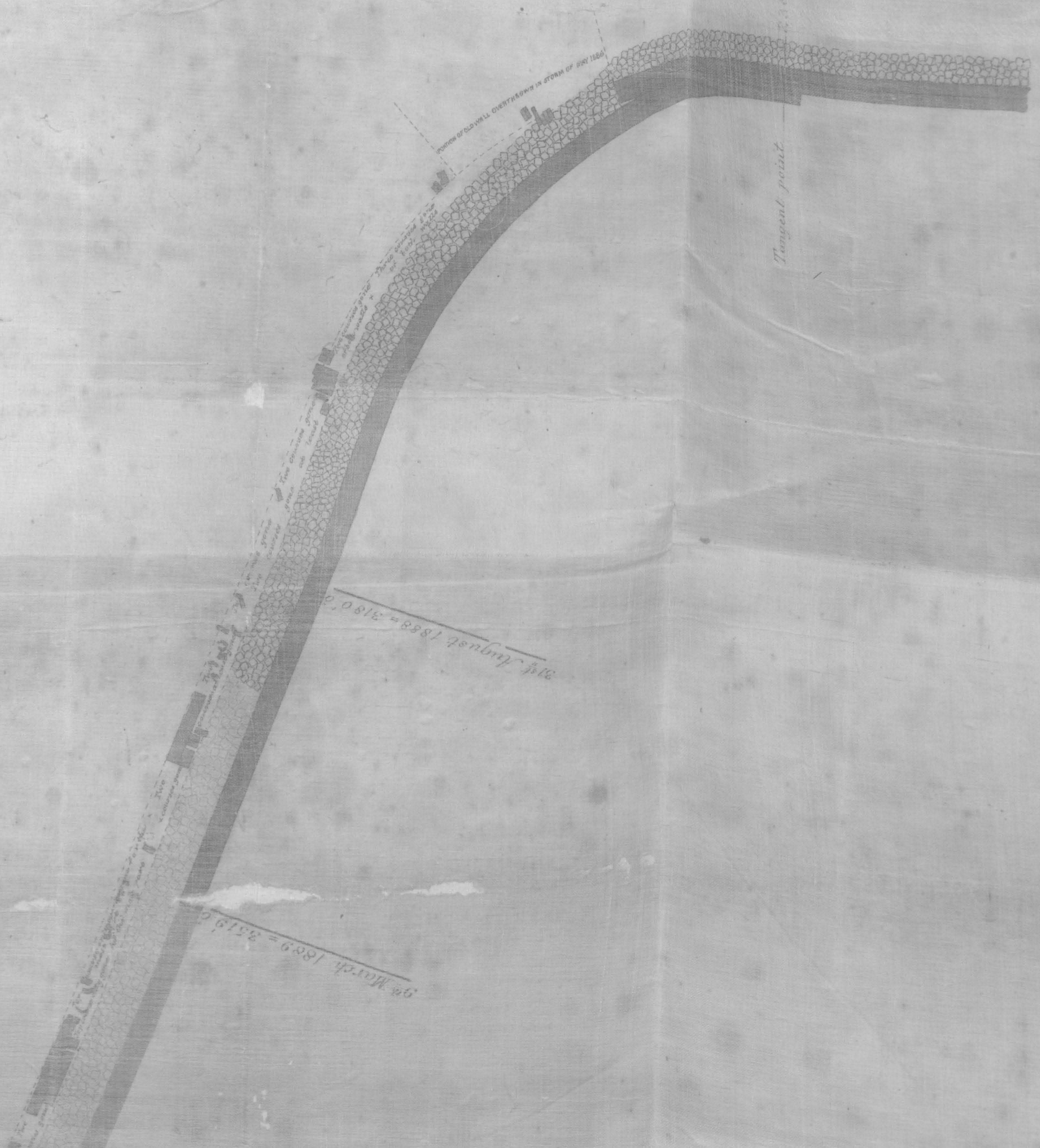


Note.

- ▬ Neutral tint shows progress upto 9th March 89 (Sanctioned Design)
- ▬ Blue shows portion of Pier to be built to complete curve.
- ▬ Red shows Plan A.
- ▬ Yellow shows portion of Pier ordered to be left unprotected with Wave breaker blocks,
  Vide _ G.O. Nº 622 W. dated 2nd March 89, para Nº 4.

Scale 100 feet to an inch.




PORTION OF OLD WALL OVERTHROWN IN STORM OF MAY 1886
Tangent point
31st August 1888 = 3190.0
9th March 1889 = 3519.5

Engineer
Harbour Trust Board.
12.3.89

to decide but the following are the facts of the case. The North pier was completed up to 2526 feet from the starting point by December 1886, and this length has been protected with wave breaking blocks. The North pier work was resumed on the 1st February 1889 and by the 9th March was completed up to 2715 feet. This work is now going on and it is proposed to extend it to the end of the curve or to 2858 feet. Should plan I of the proposals considered by the London Committee or any modification of it be hereafter adopted it will be necessary to remove all the work put down from 2180 feet to 2858 feet and of course the removal of the wave breaker blocks in this portion of the work will be a most serious undertaking. We shall have (if this entrance is adopted) in any case to remove them for 346 feet (that is from 2180 to 2526 feet) as they are already put down, but it was considered advisable in the case of this form of entrance being ordered not to place wave breaker blocks for 332 feet that is from 2526 to 2858, and it was believed from the plans

that

that the remains of the old North Pier ruined in the Cyclone of Novr. 1881 would be sufficient protection for this length of new pier, and Government directed that wave breaker blocks should not be put down.

4. Mr. Pogson the Engineer for the Harbour Board Trust reports in para 7 of his letter that at the curve "the old wall has "been overthrown down to the lower "blocks" and that therefore little or no protection can be hoped for from it. This is not as shown in plans where it is stated that in the worst place in the curve there are "2 courses gone at least".

5. This morning I met Mr. Pogson and went over the North pier work with him and after inspection I agree with that officer that it is advisable that this portion of the pier wall should not be left in May when Cyclones are not unusual without protection, and therefore I recommend in place of, as proposed by Mr. Pogson, 1 row of wave breaker blocks being "set" with Lewises on the North side of the wall, that 2 rows should so be placed, and as stated by that officer

there

these blocks as "set" can be taken up whole and uninjured just as the "superstructure will have to be." should plan I or any modification of it be adopted.

6. Should it be finally determined that this plan be not adopted (and I ~~think~~ trust before long a final decision will be arrived at) it will be advisable for the upper courses of these wave breaker blocks to be taken up and placed in "Random". Also that additional wave breaker blocks be put down and the 28 feet of wave breaker protection be completed before the North Eastern Monsoon say before the 15th October 1889. I therefore propose that the Madras Harbour Board Trust be authorised and requested as soon as practicable to place 2 rows of wave breaker blocks on the North side of the extension of the North pier beyond, where it is already protected by the 28 feet width of wave breakers, and to extend the North pier as far as they can this season with this protection, but that it should not be carried on beyond the

~~east~~

~~east~~ end of the curve until the question of putting down the abutment is settled. There is a further reason for this proposal, namely that space for the storage of wave breaker blocks is wanted and it is therefore of importance that the wave breaker blocks that are ready for use (3 months old) should be moved from the ground and the space now occupied by them be made available for new blocks.

821

WMM
15.3.89

Madras,
March 16, 1889 } EW

18/3/89

13

(82)

Note Protection Harbour
16th March

Scarf breach in the bank at root of pier where the pier portion in blocks begins

There has nothing been done since April 87 to the North pier until Jany 89
In Decr & Jany 89 some broken blocks were put down to strengthen the protection in the straight portion This was necessary and is not in the place which if the Pinkerton extension is made would have to be taken up
The site at 2059 to the Abutment is without question the worst one
and therefore has 9th March
There is 144 ft to be done this at 5 ft per day will be reached 9th April

---

~~Att~~ Titans were taken back and turned by 30th April then work starts on say 23rd April

Work commenced about 15th June

(5

When breakers can be dropped at the rate of 20 ft per day
If set 10 ft per day

Rubble base is all down but if more broken are set a little more would be required

Rubble in N & S
Pier is done except
a bit at the ends

Abutment blocks will
be ready by say 15th July
this if they are put down
will render ready for
another dolly

There cutting is a
weak place at the
end of present concrete
protection at end of North
Pier and it is advisable
for it to be strengthened
this could be done by
2 rows of concrete
blocks being set (with
stones down random)
and if this is done the
labour of taking ~~them~~ pin in cutting up
again (if necessary) would
be much reduced
There is the old work in
front and with some
rubble put down this
could be done probably at
the rate of 10 ft per day
144
189
333
The pier blocks for the
142 ft to be done will
be done by 4th April

16

14 days which this to
setting blocks commencing
in 23rd April therefore this
work could be done by
the time the Titan was to
be brought back
If this portion of pier were not
to be taken up then blocks
were broken will have to be
taken up or some of them
and placed random

Mr Ferguson says that he
has ~~as~~ not given sufficient
~~for~~ in his yard for W Blocks
and is therefore anxious to
get them off
He is making them as fast
as he has ~~wish~~ space enough
for this work and therefore
is anxious to render sets
them as quickly as possible
This is an additional reason
for the ~~32t~~ W blocks being
put down in the 142 ft

~~In~~ Bay July the question
of extension ought to be
finally settled and should
it be decided that the
Pacha intends to ~~extend~~
round the outer portion
of the N Pier and to complete
there will be no difficulty in
taking up the ~~32t~~ 32t W blocks
and placing them in random
~~strength~~ be making up the

~~28~~ but 20 ft the
width of wave breaker
that can be done by
the Titan. This ought
to be done by the
next season.

when cyclones are
unusual without
protection
I recommend
of as far as by
1 Row of wave
blocks being "set" with
Lewises on the North
side of the wall that
2 Rows sh^d be placed
and as stated by that
Mem "these blocks
" "set" can be
" which and
" just as
" with
Plan I
if it be
6 Sh^d it be
determined that
plan be not accepted
(and I trust before the
long a final decision
will be arrived at)
it will be advisable for
the upper courses of these
wave breaker blocks to be
taken up and placed in
"Random" as that
additional Wave breaker
blocks be put down and

were taken
completed
V.E. Dunsmore
15 Oct 89

~~follows~~

known that
the Aberdeen Harbour
Board treat the continuation
and requested us soon
take the place
were taken
North
in
and
is
the
Wear
and the
North Pier
as soon as they can
this season with this
protection, but that it
shd not be carried on
beyond the end of the
season until the question
of putting down the
Abutment blocks is
settled.
There is a further reason
for this protest namely

There is 144 ft to ~~the~~
seaward side of abutment
(if laid down)
Rate of progress made
5 ft per day
therefore this is 29 days
say 30 days.
that 9th March + 30 days
say 9th April

821

17

wave breaker
completed

Progress North Pier

Aug/ 88
Surf bank nothing done
since 31st Dec 86

Rubble base } nothing done
Superstructure } since 30th April 87

Sept 88 ~~at~~ as above

Telegram to Resume Harbour Works
and further additional blocks
dated 24th Dec
GO communicating No 174 W
dated 22nd Jan 89

Oct Progress Report
as above

Nov
~~North~~
Surf bank 245½ tons
Rubble base } as above
Superstructure }

Decr
Additional wave breaker blocks
put down
Surf bank nothing done since 30th Nov 88
Rubble base } as above
Superstructure } nothing done since 30 April 87

Jany 76 - 30 Ton Wavebreaker
blocks laid down
along the inner straight of the
completing the Wave breaker to the
end of completed portion of pier

North pier was stopped 30 April 87
and resumed 1st Feb 89
9th March 189 ft was done then
in say 37 days

From Progress Reports

Surf bank ?
nothing done since 31st Dec 86
Rubble base } nothing done
Superstructure } since 30 April
87

In Nov 88 821
245½ tons surf bank
put down

In Dec 88
some additional ~~[illegible]~~
wave breaker blocks were
put down

In Jany 89
76 - 30 ton Wave breaker
blocks put down
along inner straight of pier
completing the wave breaker
to the end of the completed
portion of pier

North pier was stopped 18
30 April 87 and
resumed 1st Feb 89
By 9th March 189 ft were
done in say 35 days or
say 5 ft per day
There is 144 ft to the 18
broken site of abutment
~~it that do~~
say 30 days more

not for the extension

wave breaker
completed

Want to know
When is it necessary
to strike back [illegible]
and when can work be
resumed —

At what rate per day
can the 20 ft of wave-
breaker protection be laid
down

Is the Rubble base
ready for the whole of
North [illegible] or if not
for how great a length

When will abutment blocks
be ready for use

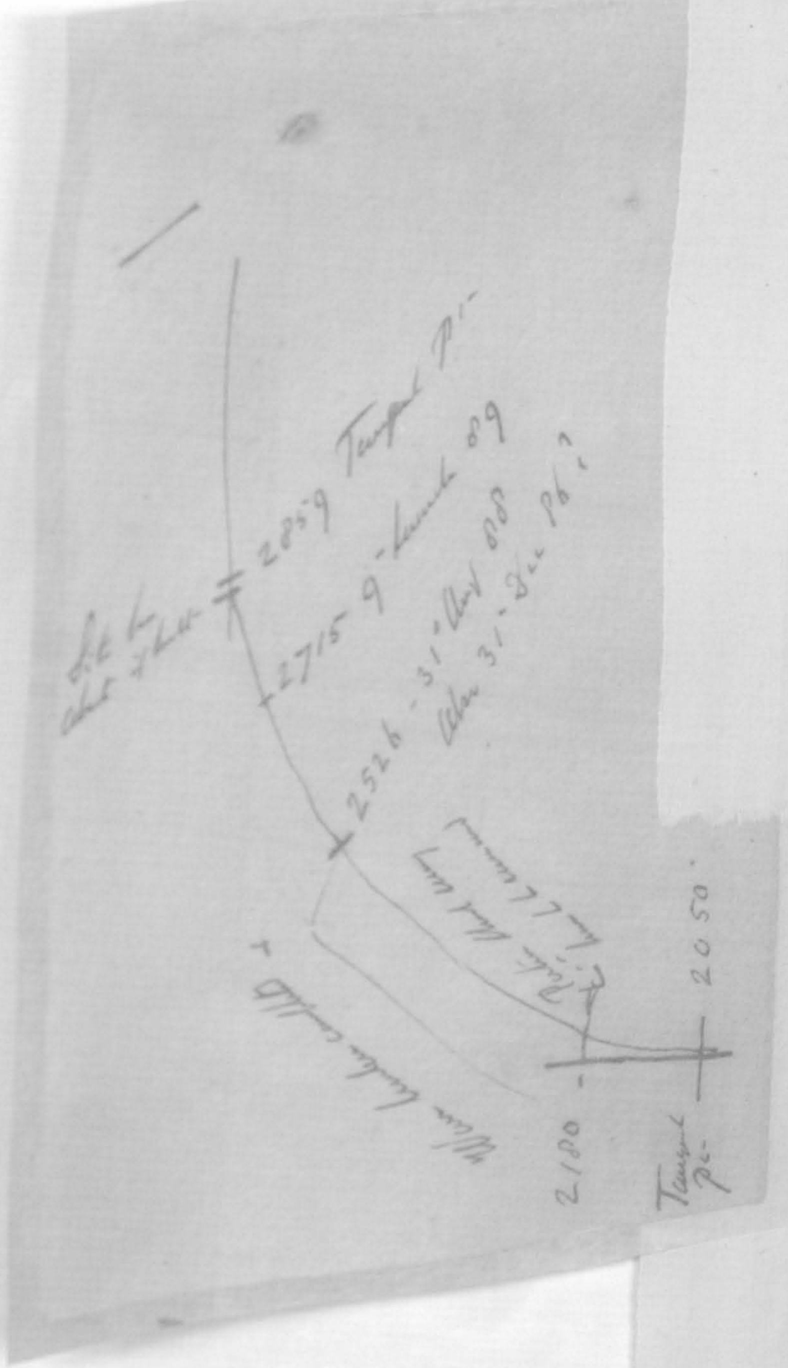
Mr Parkes says there will be
about 250 ft to build beyond
completed land (@ 2526
that is to 2776) - also
to set the abutment blocks
This allows to be an error
be allowed for this say 50 days
on the rate of 5 ft per day as before
Mr Parkes says 3 months to finish

Is Mr Pogson's Report the section
it adhered that the section
proposed to be left without
protection is protected by the old
work in as good a state as
at the end of the [illegible] North [illegible]
Report [illegible] left [illegible] by "2 [illegible] [illegible]

root for the 1st extension

wave breaker
[illegible]

Want to know
When is it necessary



Note by Ch Eng

There are 2 points brought forward in the papers forwarded by the Chairman of the Harbour Board Trust-

1st The ~~position~~ length of the extension of the North pier that may be proceeded with now

2nd Whether this extension sh^d be left as is for the present without the protection of Wave Breaker Blocks

2 With regard to the 1st point I see no objection whatever to Mr Poyser's proposal that the North pier sh^d be continued as far as the end of the Curve that is to 2858 ft from the starting point of the North pier

This is the ~~place~~ spot where sh^d the abutment blocks (ordered to be made) be ~~they are~~ to be put down} they will probably be placed so as to form the root for the extension

would be sufficient
protection for the
length of new ~~south~~
pier and GW directed
that wave breaker
blocks sh^d not be
put down

4 ~~The~~ Mr Pogson the Engineer
to the Harbour Board Trust
reports in para 7 of his
letter that at the curve
"the old wall has been"
"worn down to the"
"lower blocks" and that
therefore little or no
protection can be looked
for from it
This is not as shown
in plans where it is
stated ~~at~~ that on the
most places in the lower
~~that~~ there are "2 courses
given at least"

5 This morning I met
Mr Pogson and went
over the North pier with
with him and ~~I so~~
after inspection I agree
with that officer that
it is advisable that this
portion of the pier wall
sh^d not be left in [illegible]

that ~~the block ground~~
space for the storage
of wave breaker blocks
is wanted and it is
therefore of importance
that the wave breaker
blocks that are ready
for use (3 months old)
sh^d be removed from
the ground and the
space now occupied by
them be made available
for new blocks.

16/3/89

G 6

The Note of the Chief Eng^r
is forwarded for information
to the Harbour Trust
Board and they
are authorised to carry
on the North pier as far
as they can this season
with the protection as
proposed.

A/

821

B & R
C works

PUBLIC WORKS DEPARTMENT.

101

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 19th March

READ the following

Letter from the Chairman M. H. T. Board R. E. No. 969 dated 12th March 1889.
Endorsement thereon in the Marine Dept. " dated 14th March 1889.
Note by the Chief Engineer P. W. D. " dated 16th March 1889.

The note by the Chief Engineer is forwarded for information to the Harbour Trust Board, and they are authorised to carry on the North pier as far as they can this season with the protection as proposed.

HCS
18 mar.

18. 3. 89

This is a technical point on which I think we must be guided by the Chief Engineer's opinion.

HCS
18 mar.

C

18/3/89

24

Chairman M. H. T. Bd 27/3
Marine Dept. 27/3

13-9246.

Govt. of {1889} Madras.

PUBLIC WORKS.

Print soon

Dated

Recd. Encl.

March

G.O. 19 1889 No. 824 W

Hr. works

=

Note by the Ch. Engr., Pub. Dept., ~~for~~ on the subject of ~~the~~ continuing the north pier ~~& the~~ with ~~the~~ protective works, and to the Harbour Trust Board.

25

JH 17/3

19/3