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1,000-55-7-06

Judicial (189) Department.

ORDINARY MS.

G.O., No.

DATED

[Despatch Abstract.]

24. 8. 96
20. 6. 06. ✓
8507 ✓
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Gobt. of (1887) Madras.

PUBLIC WORKS.

Marine

Print under the

Dated

Recd.

Encl.

G.O., 4/8/1896 No. 536 Mar

Madras Harbour

Ordered that the Note by the
Chief Engr. P.W.D., on the question
of the shoaling of the - and
Roadstead be forwarded to
the Home Govt. for Commu-
nication to the Cong. Engineer
in London.

Desiring that the accompany-
ing Note by the Chief Engr. P.W.D.,
on the question of the shoaling
of the Madras Harbour and
Roadstead be placed before
the Cong. Engr. in London for
consideration in connection
with the previous literature
on the subject.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

READ—the following paper :—

Note by the Chief Engineer, Public Works Department.

In his progress report on the Madras Harbour Works for the quarter ending 30th September 1895, Mr. Pogson, Harbour Engineer, stated in paragraph 40: "The shallowing of the roadstead cannot be said to be due to the harbour, where deep water is concerned." On this the Harbour Trust Board stated that they "would be glad to receive any information on record which Government may be able to furnish with regard to the variation in the depth of the roadstead," and I therefore wrote my memo. No. 76 E., dated 18th February 1896, in which I showed that the conclusions arrived at by Mr. Pogson were opposed to the facts mentioned by the Harbour Committee of 1869.

2. Mr. Pogson now submits a report, No. 68 A., dated 25th April 1896, in which his former opinion seems to be somewhat modified, for in paragraph 17 he states that "The harbour might tend to hasten the natural advance of the foreshore or on the other hand prolong the action of erosion or washing away of the foreshore which has repeatedly taken place; but, with the foregoing facts before us, it cannot be said to be the sole cause of the shallowing of the roadstead in 1896 when deepening of the roadstead is proved to have taken place for eight years after its construction."

3. From this Mr. Pogson acknowledges that the construction of the harbour may have had some effect on the shallowing, and I am at a loss to understand how any one who has watched the accretion of sand to the south of the harbour can maintain that that accretion is not due mainly, if not entirely, to the harbour walls, and that it is that accretion that causes the shallowing of the roadstead by deflecting the littoral current out to sea, which current is known to carry with it a large quantity of sand.

4. It may be of interest to show how the state of affairs as now occurring was foretold by the Harbour Committee of 1869. In paragraph 9 of its report it is written "We fully considered, at an early stage of our proceedings, the question of forming a closed harbour, in preference to a breakwater parallel to the shore, and we are of opinion that a harbour formed by stone dykes running out at any angle with the shore, and for any length, would be ineffectual, and that the inevitable result of such a construction in the Madras roads would be the eventual extension of the beach, and the complete closure of the mouth of the harbour, followed in course of time by the shoaling up of the harbour itself;" and again in the latter part of paragraph 13 "We cannot agree with Mr. Fraser either that the quantity of sand, which is carried along the shore by the littoral currents, is of so limited an amount as to render it capable of being controlled by artificial works, or that the effect of a series of groynes would in any way differ from that of the small groynes which have already been thrown out from the beach at Madras which has practically resulted in the extension of the beach to near the ends of the groynes. The actual quantity of sand moving along the shore is certainly unknown, but if the construction of groynes leads to the formation of a new beach in advance of the original one, and precisely similar to it, the inference is, that either the sand which has been heaped up was derived from material brought to the spot by littoral currents, or that if it were thrown up by the surf, the quantity thus obtained from the bed of the sea was replaced by an equal quantity brought from a distance. We consider there is strong reason to conclude that if a beach is extended

a hundred yards by means of groynes, it might be extended a hundred yards further by continuing the process, and in each case a new line of beach being formed precisely similar to the original beach, there would appear to be nothing to prevent the shore being extended to any amount that might be desired."

5. The records quoted by Mr. Pogson, many of which I have been unable to find, seem to show that Madras has been visited at intervals by storms which have eroded the foreshore, and that protective measures had to be taken to prevent inundation. In the report of the Harbour Committee, paragraph 51, it is stated that "Madras is subjected to severe hurricanes about fifteen times in a century, or once every six or seven years."

6. I can find nothing authentic on record regarding the advance of the foreshore, and it is to be regretted that Mr. Pogson did not give his authority. He says in paragraph 6 "The coast line then advanced for years." In paragraph 8 "From 1683 the shore line advanced again for about four years." In paragraph 9 "The coast line advanced." I can find nothing to confirm these statements which, even if correct, only show that after violent storms which eroded the shore, it returned to about its normal condition: there seems nothing to prove that it advanced materially beyond the normal line.

7. Even if the records quoted by him in paragraphs 12, 13 are to be depended on, it does not show that there was any material advance of the foreshore, and I do not for a moment contend that there has not been slight alterations in the line of foreshore, but that there has been any material advance till the construction of the harbour is not, I consider, proved by anything that Mr. Pogson has stated.

8. As regards Cocoonut island, its existence seems to have been doubted, as in paragraph 16 of the Committee's report it is written "If there is any truth in the tradition that the shore at Madras was formerly two or three miles in advance of its present position": the remark was written in reference to a statement made by a Mr. Perkes in a report (paragraph 32) on his proposals for a harbour which is "people are now living (1868) whose forefathers have assured them that they used to walk out on a Sunday some two or three miles to Cocoonut island to enjoy themselves, but every trace of it is now gone." This is quoted by Mr. Pogson, but he omits to mention that Mr. Perkes refers to it in support of his theory laid down in his previous paragraph 31 that the sea at Madras had a tendency to encroach on the land. From the remarks of Mr. Perkes it is evident that people must have been able to walk two or three miles out to Cocoonut island some time after 1750, and it seems quite incredible that there should be nothing authentic regarding the existence of the island at such a late date.

9. Mr. Pogson goes at considerable length into the fact of wrecks, &c., being found covered with sand where there was in 1868 a clay bed, the cases he mentions as having been ascertained since 1876—the date of the commencement of the harbour. Paragraphs 35 to 42 only help to overthrow his own theory that the harbour had nothing to do with the shoaling of the roadstead.

10. It was proved by Lieutenant Sweeny's chart in 1859, and again by the diver employed in 1868, that the bed of the sea beyond the 6-fathom line was stiff clay, there was therefore no change in the nine years 1859–68, and if articles were found covered with sand after the harbour was commenced in 1876, the natural inference is that it was the harbour that caused the accumulation; but Mr. Pogson states in paragraph 27 that where there was a depth of 51' and a clay bottom in 1868 there is now, and was in 1876, 39' and a sandy bottom. If this statement is correct, it would show conclusively that the roadstead must have shoaled up considerably in the eight years before the harbour was begun, but I am unable to ascertain how Mr. Pogson got the information. I can nowhere find it stated that there was a depth of 51' at any particular place, and how he asserts that that was the depth in 1868 when it was only 39' at the same spot in 1876 I cannot surmise.

11. In the Committee's report, paragraph 23, it is stated that the depth was a little over 7 fathoms (42') at 900 yards from the outer end of the pier at ordinary low water, and this point, i.e., the end of the pier, is 1,211' 9" from Mr. Pogson's base line

as shown on the tracing submitted with his letter No. 68 A, dated 25th April 1896; therefore the depth was a little over 42' at $1,211' 9" + 2,700' = 3,911' 9"$ from his base line; and from the soundings given on the tracing, it will be seen that in 1876 the depth at that distance was over 48', so that it would appear that the roadstead actually deepened by about 6' in the eight years prior to the construction of the harbour instead of having shallowed by 12' as made out by Mr. Pogson in his paragraph 27.

12. As the bed was reported to be stiff clay beyond the 6-fathom line in 1868, the deepening of 6' in the eight years (1868–1876) can only be accounted for by a difference in datum, and it is noticed that the depth is stated to be a *little over 7 fathoms* below *low water*, while Mr. Pogson's soundings refer to deHavilland's M.S.L.

13. As I have clearly shown in paragraph 11 that the roadstead did not shallow before 1876, it is unnecessary for me to refer to Mr. Pogson's paragraphs 34, 38 and 57, as they appear to have been all written on the erroneous assumption that the roadstead had shallowed before that year.

14. In reference to Mr. Pogson's paragraph 59, I would remark that I consider there is every reason for assuming that the roadstead "deepened in 1882, and again in 1889, due to the partial construction of the harbour." In 1881 the harbour, as originally designed, was much damaged by a cyclone; it was completed to low water level in 1882 and between that time till the new design was in good progress, the waves swept over the side walls and caused the water inside to heap up, and this would naturally create a scour at the entrance and tend to deepen it; but anyhow I consider the figures given in paragraphs 61 and 62 are almost useless, as Mr. Pogson has only picked out certain years and has not given the dates on which the distances and soundings were taken, and it is well known that the depths vary considerably at different times of the year.

15. It is distinctly stated in paragraph 28 of the Committee's report of 1869 as follows: "The European diver who has walked all about the bed of the sea from opposite the Fort up to opposite the Railway terminus, and as far out as 11 fathoms depth, informs us that the loose sand extends as far as 6 fathoms only, beyond which the bed of the sea is stiff blue clay with a small depth of firm sand over it, and he adduces, as evidence in support of his statement, the circumstances that while within the 6-fathom line the height of the sand with reference to fixed articles, such as anchors, is variable, he has never found any variation at a greater depth; and as soundings taken under the orders of the Master Attendant, while our Committee was sitting, give the same results as the published chart by Lieutenant Sweeny of the late Indian Navy in 1859, there is very strong ground for believing that beyond the 6-fathom line there is no sensible variation in the bed of the sea," and again in paragraph 46 " . . . to where the depth is between 5 and 6 fathoms. Beyond this limit the bed of the sea is firm and exhibits no signs of having been subjected to any change since the date at which a chart of the roads was first drawn up." Mr. Pogson tries to dispute these statements and goes so far as to state in the latter part of his paragraph 27 and his paragraph 28 that the Committee's views coincided with his own; but it is necessary to point out that the quotation in his paragraph 27 is taken from a report submitted to the Committee by a Mr. Chisholm, and was not the opinion of the Committee itself, which opinion was, as I have stated above.

16. Mr. Pogson's paragraph 58 is very misleading; the opinion of the Committee was, as stated in my previous paragraph, the variations referred to in its report, and which he makes a point of, were those occurring within the 6-fathom line.

17. Mr. Pogson's paragraphs 43, 44, 45, 46, 49 and 50 are written with the view of proving that there is a current existing beyond the 6-fathom, and extending to the $9\frac{1}{2}$ -fathom line. I do not wish to dispute this, as I think it quite certain that there is such a current, but Mr. Pogson has said nothing to show that there was a current as far out as the $9\frac{1}{2}$ -fathom line before the construction of the harbour, and in the face of the Committee's report I think it highly improbable that there was, but I am of opinion that the more the sand accretes to the south of the harbour, the further out the current will extend.

former/

18. Mr. Pogson's paragraphs 53 and 54 are altogether misleading. The Committee of 1869 formed its opinion that "there is no sensible variation in the bed of the sea beyond 6-fathom" after considering Lieutenant Sweeny's chart, so that the latter was not ignored. What for were surveys Mr. Pogson refers to, I do not know. I am not aware that there are any. Paragraph 54 refers to a statement made by a Mr. Chisholm in a report submitted to the Committee, and the latter had also examined Lieutenant Sweeny's chart and come to quite a different conclusion to the former.

19. I cannot see that Mr. Pogson has advanced any reliable facts or arguments to upset the conclusions arrived at in my memo. of 18th February 1896. The facts are that in 1859 the bed of the sea beyond the 6-fathom line was ascertained to be stiff clay; in 1868, or nine years later, the bed was found to be the same by a diver specially employed: there had thus been no change in these years, but since the harbour was commenced, the roadstead has shoaled up, and it now appears that the deposit of sand which had not extended beyond the 6-fathom line in 1868, or prior to the construction of the harbour, has now reached as far out as the 9-fathom line. The statement that the roadstead shoaled during the eight years before the harbour was begun, I have shown to be incorrect in my paragraph 11.

20. What Mr. Pogson apparently wishes to prove is that the Madras roadstead has deepened and shallowed at intervals of time for many years past, and that it would have continued to do so independent of the construction of the harbour, and that the present is a period of shallowing; to support his theory he has quoted from records extending back 350 years; but as I have before stated, the reliable records only seem to show that Madras has been periodically visited by storms. It is a pity that Mr. Pogson did not try to work out from the records how long these periods of deepening and shallowing lasted, for if the present period of shoaling assumed by him to be in progress is nearly over, it may be unnecessary to take any steps to protect the harbour entrance.

21. Mr. Pogson's arguments would tend to show that, as, in spite of the construction of works along the coast, the roadstead will deepen and shallow at intervals, it will be absolutely useless to construct any work to prevent the shoaling at the entrance, and therefore the idea of constructing the southern groyne proposed by him should be abandoned, as, after a certain period, the roadstead will shallow whatever works are constructed.

22. I have not thought it necessary to answer Mr. Pogson's report paragraph by paragraph, but I think I have said enough to show that the shoaling up of the roadstead must be attributed mainly, if not entirely, to the harbour works.

23. What the effect of a closed harbour would be was foretold by the Committee, whose opinion I have quoted at the beginning of the letter, and the action that has taken place is only what was expected by any one acquainted with the effects of groynes on the East Coast, though that action has been much faster than anticipated, as it was supposed that it would be very many years before the sand would reach the entrance.

24. Though I am fully convinced that the harbour has been the cause of the shoaling, I do not see any advantage in arguing the question; the fact remains that the depth at the entrance of the harbour is gradually getting less, and something must be done before long. In my opinion the southern groyne proposed by Mr. Pogson will be absolutely useless, as it stands to reason that there would be the same accumulation of sand to the south of it as there is to the south of the present harbour.

* No. 966, dated 23rd March 1896, printed with G.O. No. 396, Marine, dated 5th June 1896.

point of view, is, I believe, the north-east objections to it, of which I am not aware.

(Signed)

30th July 1896.

D. McNEIL CAMPBELL, Colonel, R.E.,
Chief Engineer.

ORDER—No. 536, Marine, dated 4th August 1896.

Ordered that the note by the Chief Engineer, Public Works Department, be forwarded to the Home Government for communication to the Consulting Engineer in London.

[Here enter No. 11, Marine, dated 4th August 1896.]

(True Extract.)

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Secretary to Government.

To the Chairman, Harbour Trust Board.

Exd T. K. Narayana Aiyangar.

Spare Copies

Gobt. of {1896} Madras.

MARINE.

Dated August, 4th.

Recd.

Encl.

G.O. No. 536, 4th Aug. 1896.

AUGUST.

Madras Harbour

Ordered that the note by the Chief Engineer, Public Works Department, on the question of the shoaling of the — and roadstead, be forwarded to the Home Government for communication to the Consulting Engineer in London.

No. 11, MARINE, 4TH AUGUST 1896.

MARINE DEPARTMENT.

LETTER—to

THE RIGHT HONOURABLE THE SECRETARY OF STATE FOR INDIA.

MY LORD,

With our despatch No. 9, Marine, dated 20th June 1896, we had the honour to lay before your Lordship a communication from the Engineer of the Madras Harbour Trust Board on the question of the shoaling of the harbour and roadstead. Our

* Recorded with G.O. No. 536, Marine, dated
4th August 1896.

Chief Engineer has now contributed the accompanying note * which we desire to be placed before the Consulting Engi-

neer in London for consideration in connection with the previous literature on the subject.

We have the honour to be,

My Lord,

Your Lordship's most obedient, humble servants,

(Signed) A. E. HAVELOCK.

(„) H. W. BLISS.

(„) J. GROSE.

OOTACAMUND,
4th August 1896.

Ed. T. K. Narayana Aiyangar.

GOVT. OF FORT ST. GEORGE.

MARINE (1896) DEPARTMENT.

LETTER to the Right Honourable
the Secretary of State for
India.

Dated Aug. 4th,

No. 11 of 1896.

DESIRING that the accompanying note by the Chief Engineer, Public Works Department, on the question of the shoaling of the Madras harbour and roadstead, be placed before the Consulting Engineer in London for consideration in connection with the previous literature on the subject.

"I think this note should be sent home at once for communication to Sir A. Russell, the Consulting Engineer for the Harbour-works, who is now considering with Mr. Pogson what works may be necessary for the protection of the Harbour entrance."

J.E.H.

3.8.96

10
Note for H.E. the Governor

In his progress report on the Madras Harbour Works for the quarter ending 30th September 1895, Mr. Pogson, Harbour Engineer, stated in para 40, "The shallowing of the roadstead cannot be said to be due to the harbour, where deep water is concerned." On this the Harbour Trust Board stated that they "would be glad to receive any information on record which Government may be able to furnish with regard to the variation in the depth of the roadstead," and I therefore wrote my memo. N^o. 76 E dated 18th February 1896 in which I showed that the conclusions arrived at by Mr. Pogson were opposed to the facts mentioned by the Harbour Committee of 1869.

2. Mr. Pogson now submits a report N^o. 68 A dated 25th April 1896 in which his former

former opinion seems to be somewhat modified for in para 17 he states that "The harbours might tend to hasten the natural advance of the foreshore or on the other hand prolong the action of erosion or washing away of the foreshore which has repeatedly taken place, but with the foregoing facts before us it cannot be said to be the sole cause of the shallowing of the roadstead in 1896 when deepening of the roadstead is proved to have taken place for 8 years after its construction."

3. From this Mr Poggson acknowledges that the construction of the Harbour may have had some effect on the shallowing, and I am at a loss to understand how any one who has watched the accretion of sand to the south of the harbour can maintain that that accretion is not due mainly, if not entirely, to the Harbour walls, and that it is that accretion that causes the shallowing of the roadstead by deflecting the littoral current out to sea

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is of so limited an amount
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5. The records quoted by
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para 51 it is stated that
"Madras is subjected to
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6. I can find nothing
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in para 6 "The coast line
then advanced for years".
In para 8 "From 1683 the
shore line advanced again"
for about 4 years.": in para
9 "The coast line advanced".
I can find nothing to
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12. As the bed was reported to be stiff clay beyond the 6 fathom line in 1868 the deepening of 6' in the 8 years 1868-1876 can only be accounted for by a difference in datum and it is noted that the depth is stated to be a little over

7 fathoms below low water, while Mr Pogson's soundings refer to de Harland's M.S.L.

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In 1881 the harbour as originally designed was much damaged by a cyclone, it was completed to low water level in 1882 and between that time till the new design was in good progress, the waves swept over the side walls and caused the water inside to heap up and this would naturally create a scow at the entrance and tend to deepen it; but anyhow I consider the figures given in paras 61 and 62 are almost useless, as Mr Pogson has only picked out certain years and has not given the dates on which the distances and soundings were taken, and it is well known that the depths vary considerably at different times of the year.

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"x x x So where the depth
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para 27 and his para 28
that the Committee ^{views} ~~never~~
coincided with his own;
but it is necessary to
point out that the quota-
tion in his para 27 is
taken from a report sub-
mitted to the Committee
by a Mr. Chisholm, and
was not the opinion of
the Committee itself, which
opinion was, as I have
stated above.

16. Mr. Pogson's para 58
is very misleading; the
opinion of the Committee
was as stated in my pre-
vious para, the variations
referred to in its report
and which he makes a
point

11
stated point of view those occurring
within the 6 fathom line.
Com. 17. Mr Pogson's paras 43,
as for 44, 45, 46, 49 and 50 are
diver written with the view of
about proving that there is a
from current existing beyond
up to the 6 fathom, and extending
term to the 9½ fathom line.
as el I do not wish to dispute
inform this as I think it quite
sand certain that there is
six of such a current, but Mr
which Pogson has said nothing
stiff to show that there was a
depth current as far out as
it, the 9½ fathom line before
evid the construction of the
his a harbour, and in the face
stan of the Committee's report
the I think it highly improba-
height- ble that there was, but
refer- I am of opinion that
such the more the sand accretes
he to the south of the harbour
var the further out the cur-
dep- rent will extend.
tak-
of
whi
siti
res
cha
of
mi
gr
be
lin

18. Mr Pogson's paras
53 and 54 are altogether
misleading. The Committee
of 1869 formed its opinion
that "there is no sensible
variation in the bed of the
sea beyond 6 fathom".
After considering Lt
Severn's chart, so that
the

the latter was not ignored.
what ^{former survey} follows ^{Severn's} Mr
Pogson refers to. I do not
know. I am not aware
that there are any. Para
54 refers to a statement
made by a Mr Chisholm
in a report submitted to
the Committee, and the
latter had also examined
Lt Severn's chart and come
to quite a different con-
-clusion to the former.
19. I cannot see that Mr
Pogson has advanced any
reliable facts or arguments
to upset the conclusions
arrived at in my memo
of 18th February 1896. The
facts are that in 1859 the
bed of the sea beyond the
6 fathom line was ascertai-
-ed to be stiff clay: in 1868
or 9 years later the bed was
found to be the same by a
diver specially employed;
there had thus been no
change in these years, but
since the harbour was com-
-menced the roadstead
has shoaled up, and it
now appears that the
deposit of sand which
had not extended beyond
the 6 fathom line in 1868,
or prior to the construction
of

of the Harboure has now reached as far out as the 9 fathom line.

The statement that the roadstead shoaled during the 8 years before the Harbours was begun I have shown to be incorrect in my para 11.

20. What Mr Pogson apparently wishes to prove is that the Madras roadstead has deepened and shallowed at intervals of time for many years past, and that it would have continued to do so independent of the construction of the Harbours, and that the present is a period of shallowing; to support his theory he has quoted from records extending back 350 years, but as I have before stated the reliable records only seem to show that Madras has been periodically visited by storms. It is a pity that Mr Pogson did not try to work out from the records how long these periods of deepening and shallowing lasted, for if the present period of shoaling assumed by him

by him to be in progress is nearly over it may be unnecessary to take any steps to protect the harbour entrance.

21. Mr Pogson's arguments would tend to show that, in spite of the construction of works along the coast the roadstead will deepen and shallow at intervals, it will be absolutely useless to construct any work to prevent the shoaling at the entrance, and therefore the idea of constructing the Southern groynes proposed by him should be abandoned, as, after a certain period, the roadstead will shallow, whatever works are constructed.

22. I have not thought it necessary to answer Mr Pogson's report para by para, but I think I have said enough to show that the shoaling up of the roadstead must be attributed mainly, if not entirely, to the harbour works.

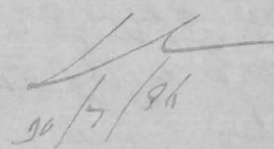
23. What the effect of a closed harbour would be was foretold by the Committee whose

whose opinion I have
quoted at the beginning
of the letter, and the action
that has taken place is
only what was expected by
any one acquainted with
the effects of groynes on
the East Coast though
that action has been
much faster than antici-
pated, as it was supposed
that it would be many
years before the
sand would reach the
entrance.

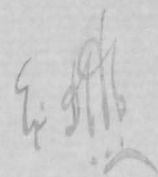
24. Though I am fully
convinced that the
harbour has been the
cause of the shoaling
I do not see any ad-
vantage in arguing the
question, the fact re-
mains that the depth
at the entrance of the
harbour is gradually
getting less, and some-
thing must be done
before long. In my
opinion the southern
groyne proposed by
Mr Popsow will be
absolutely useless as it
stands to reason that
there would be the same
accumulation of sand
to the south of it as
there is to the south of the
present

* No 966 d/23 March 1896
printed with G.O. 396
Marine d/5th June 1896.

present harbour. ¹⁰ The
groyne from the S.E. corner
would be objectionable for
reasons given by Mr Popsow
in his letter, with which
I concur. The only satis-
factory solution of the
question, from an engineering
point of view, is, I believe,
the N.E. entrance, though
there may be nautical objec-
tions to it, of which I am
not aware.


96/7/96

E.W.



Urgent

Note on the Variations
in depth of the
Madras Roadstead

G.O. 449. SD. 57. Mar 2/20/96. 96
Des. 7 a/s. 6. 96.
" $\frac{12}{1220W}$ a/s. 4. 96
" 1549 C a/s. 19. 3. 96.
" 76 E a/s. 18. 2. 96.
" $\frac{2}{119W}$ a/s. 26. 2. 96.
" 76 E a/s. 18. 2. 96.
" 529. 30W a/s. 11. 2. 96
" $\frac{2}{529W}$ a/s. 11. 2. 96.
" 3213 ON 4/5. 10. 69+

05284A. MS

PROCEEDINGS OF THE MADRAS GOVERNMENT.

119

Read the following

Note by the Chief Engineer, P.W. Department, dated 30th July 1896.

No. 536 Marine & L. - August 1896

Ordered that the note by the
Chief Engineer, P.W. Department, be --
forwarded to the Home Government --
for communication to the Consulting
Engineer in London.

The Chairman, H. T. Board.

Despatch
19/8/96

(H. E. No. // d/4" August '96)

To
The Right Honourable
the Secretary of State
for India.

120

My Lord,

With our Despatch No. 9 Marine
dated 20th June 1896, we had the --
honour to lay before your Lordship
a communication from the Engineer of
the Madras Harbour Trust Board on
the question of the shoaling of the
harbour and roadstead. Our Chief
Engineer has now contributed the
accompanying note which we ^{desire} ~~may~~
to be placed before the Constg. Engi-
neer in London for consideration
in connection with the previous --

literature

^x Recorded with G. O. Marine
dated

literature on the subject.

1/8/96
M

urgent

Deskt
19/8/96

Print emergency

John printed inquiry
and sent up as soon as
possible for signature

1/8/96
W

Govt. of {1896} Madras.
PUBLIC.

Issued

Recd.

Encl.

G.O., No. 764, 23rd July 1893.

JULY.

"Flat File" System of Record-keeping.

Directing the substitution from the 15th August 1896 by all departments of the Secretariat of the — for that at present in force.

MARINE G. No. 839

Mar. 529 of 1. 8-96

564 7.19.8296 3-8-96

708-284 of 96

B

No. 537 Marine of 5 August 1896
Communicated to
the Presidency Port
officer in continuation
of No. 529 Marine,
dated 1 August 1896

1/8/96

The Ch. H. J. Board with 1 Encl.
The P. O. with 3 Encl.

Deskt
13/8/96
note for H.C.
m.

A copy of the white docket sheet
should be obtained from the Chief
Secretariat, Fort St. George
so that two copies may be available
for communication to the officer
concerned.

Removed from No. 575 Mar.
25-8-96

Wm 13/8

No. 764, PUBLIC, 23RD JULY 1896.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

ORDER—No 764, Public, dated 23rd July 1896.

The "flat-file" system of record-keeping will be substituted for that at present in force in all departments of the Secretariat with effect from the 15th August 1896.

2. Heads of departments have already * been requested to submit communications to Government *un-creased*, and steps will be taken in the various Secretariat departments to procure from the Government Press a supply of docket forms similar to the attached samples.

3. The Public Department will arrange for the supply of the following circulation boxes to take the place of the smaller-sized box at present in use:—

Chief Secretariat..	Ordinary	35
	Confidential	22
	Local and Municipal Department	15
Revenue Secretariat		22
Public Works Secretariat		19
Total ..		113

4. Paste-boards of the prescribed patterns should be obtained from the Superintendent, Government Press, and record boards from the Superintendent, General Records.

5. The records of 1895 and those of 1896 prior to the 15th August will be converted from the "folded" into the "flat" system, and for this purpose temporary establishments will be entertained. Departments of the Secretariat will inform the Financial Department of their requirements in this respect.

(True Extract.)

[Signature]
for Chief Secretary.

To the Financial Department.
" Local and Municipal Department.
" Marine Department.
" Pension Department.
" Public Works Department (General Branch).
" " " (Railway Branch).
" " " (Irrigation Branch).
" Revenue Department.
" Accountant-General (through Financial Department).
" Superintendent, Government Press.
" " General Records.

Man 422/96

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

When given for copying _____
 When copied _____
 When examined _____
 When signed _____

189 .

READ AGAIN G.O., No.
 189 ,

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

A A A A A A A

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESTATCH
 IN ORIGINAL.

N.B. -

A = Copy in full.
 B = Not to be copied
 P = Copy abstract only.
 Q = Copy heading only

Mar 5th 1946

Mar 5th 1946

Mar 5/87

W
I proposed to send the
papers to Madras at once to
save time. No rule would be
broken by doing so.
R.S.
4 Aug 86



GOVERNMENT OF MADRAS

Public Works Department,
Irrigation Branch,

MADRAS,

only
Chennai, July 23^d 1896.

528m

Dear Col Campbell

The

Lambour Salubral were
Sanctioned by Govt of State
in 1875 for Rs 62,80,000
work was begun I think
in 1876 and was practically
Completed when in Nov.
1881 the outer arms were
greatly damaged. It is
generally said that they

Mar 5/96
528/96

Mar 21/26

were "destroyed" - but
most of the material
forming these arms still
remained and now forms
the basis of the present
"wave breaker" - when I
was in the works we were
working at the ends of
the breakwaters and one
of our chief impediments
to quick work was the
necessity for moving blocks
which had formed part
of the original breakwaters.
The mass of material on
ruins of the old breakwaters
were ~~low~~ above water at
the ends so that since

1881 at any rate. This
 has been an "entrance"
 slab in what Payson
 means when he says in
 para 69 "as in 1882"
 "the harbor walls below
 "low water had been completed
 "for over eighteen months".
 The damage done by the
 1881 storm was something
 of this sort



Mar 5/86

In some places the
damage was I don't say
worse than this but it
was not worse than this
at the entrance - those
parts of the arms running
at right angles to the shore
were not much damaged.
I believe -

I remember being told
the effect of the storm
of 1881 was to deepen
the entrance and this was
explained by the water
having washed over the
arms and causing a
seaward current at the
entrance -

I mistrust Poyon's deductions

Mar 5/86

GOVERNMENT OF MADRAS.

Public Works Department,
Irrigation Branch,

MADRAS.

Chepák,

189

as his facts are not
complete - why does he
not in para 62 give
the depths at the outfalls
for the intervening years?
one might almost suppose
he had made selection
to prove a theory - he
does not give the dates
on which the depths were
taken and we know this
varies at different times
of the year (at least
it does in other places)
except for the last

Mar 2nd
1897/98

but I have not got
the length of sitting
on a chair yet.

Mar 5/27/26

I don't think Poyson's
argument that the
harbour is not the
cause of the shallowing
suffering we admit this
shallowing, is conclusive.
~~The natural effect of~~
It might have taken
from 81 to 89 for
the sand to get beyond
end of the pier -

I return the report

Yours sincerely

J. Wilson

P.S. Browning says I
am getting on all right

Mon 5/27/86

four depths given -
to prove shallowing
he gives two readings
for 26 Jan^y + March
~~I should like to know~~
~~what the reading is~~
~~now~~ showing a difference
of 5"! To be of any
value he ought to give
monthly readings for a
series of years or at any
rate compare readings
for a series of years
all taken at the same
time of the year

Mar 432/86

Legislative (189) Department.

CURRENT No.

From

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Dated

Received

Registered

Enclosures

Spare copies.

SUBJECT.