

(1) Number of pages 66
(2) Date of repair 7-1-87
(3) Initials of the Referencer bxn

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W.D. DEPARTMENT

No.	1971, 1972, 1973-W	Press.
No.		Mis.

d 29-7-1879

197

ed or roughly handled.

19-4-79.

1971-72-73

(1) Number of pages
(2) Date of reply
(3) Initials of the Referencer

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

DEPARTMENT

Page No.	G.O. No.
101	101
Dated	

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

29th July 1879, No. 1,971 W.

Buildings and Roads.
Civil Works.

Read the following paper :—

No. 187. From G. KING, Esq., Acting Agent, Peninsular and Oriental Steam Navigation Company, to the Secretary to Government, Public Works Department, dated 11th July 1879.

REFERRING to your letter of the 7th March last, requesting me to transmit to my Directors a letter (with enclosures), No. 667 W., dated 8th March last, regarding the proposed modification in the form of the entrance to the Madras Harbour, I have now the honor to forward, herewith, copies of the opinions of seven of the Commanders in this Company's service, which were received from head-office by yesterday's mail.

2. My Directors remark in their letter to me that some of the Commanders have not confined themselves to the question of the entrance, but have dealt with the subject of the whole scheme; they considered it best, however, to send the letters as received from the Commanders, and have desired me to forward on the same to the Government.

MADRAS HARBOUR.

THE Government of Madras having requested to be favored with an opinion upon the proposed modification in the form of Harbour entrance from such of the Commanders in the service as may be possessed of the greatest experience, I have submitted the papers and plans to seven of those gentlemen, and their opinions are herewith severally recorded.

20th June 1879.

(Signed) W. BLACK.

Captain Tomlin, S.S. "Malacca."—“After carefully considering your letter and the enclosed report to the Madras Government on the new Harbour, now in construction at Madras, I am of opinion that the proposed change of form in the entrance from a straight to a projecting line, with an increase in width of 100 feet, would be an improvement and would render the entrance more easy of access.

“During the bad weather of the north-east monsoon a vessel in entering the Harbour would have the wind and current on her starboard beam, and her course of proceeding would be to round the north pierhead closely, and with her helm to port endeavour to reach as far into the north-east corner, or to windward, as possible, before letting go the anchor.

“Modern steamers are of so great a length that good way would have to be kept whilst entering to avoid being swept down upon the lee pierhead, and as the outward angle of the pier would tend to deflect the current, it would act more on the quarter as the bow felt its influence, the result being to bring the ship more in line with the outer wall of harbour when she reached the inside. In summer, when the southerly winds and currents prevail, the south pier would have to be approached in like manner.

“In fixing the position of mooring buoys, sufficient space will, I presume, be left between them and the outer wall so as to allow for a vessel being set a little to leeward before her anchor brings her up in swinging.

"If the harbour when completed affords a sheltered area, where cargo boats can pass to and fro, to load and discharge at the pier or beach in all weather, it would cause an immense saving of time, which is of such importance to mail steamers; to say nothing of the saving in damage to cargo, and I may state in conclusion that on my last voyage to Calcutta in December 1877, I was detained at Madras 72 hours, discharging an amount of cargo that could easily have been discharged in 12 hours at a port or river where the boats could have laid alongside in quietness."

Captain Parikh, S.S. "Mirzapore."—"I concur in much that Mr. R. Baldrey advances, and I share with him the fears of future results, but as the south and north walls are already so far advanced and connected with the shore, it seems unnecessary now to consider his proposals, and for the same reason, as the harbour will possibly soon be an accomplished fact, and we must accept the inevitable, I refrain from any remarks as to the necessity or otherwise of it, or its doubtful advantages over the pier, as it is, or rather as it was before the harbour works silted up the shore line, when the largest steamers could anchor with safety within one and-a-half ship's length of pier end, and boats load and discharge cargo at pier far outside any surf."

"I will merely state my opinion that in fine weather it was not wasted, and in really bad weather I should be very sorry to have to enter or leave it. I proceed then to consider Mr. Parkes' proposed modification of entrance and the arrangement of buoys."

"I consider that the proposed alteration in form of entrance is advantageous as giving—

"1st.—Greater width of entrance.

"2nd.—More space before approaching mooring.

"3rd.—A more favorable angle for the current to strike the ship when entering."

"Mr. Parkes writes of 'vessels being retained in safety within the harbour during cyclones.' His idea of the forces and effects of cyclone winds of seas differ widely from my own experiences. Even if the sea walls stood, I believe that vessels inside would be ground up together in one mass against the lee wall, to repeat the process on the opposite one when the shift of wind came. Such sea walls, placed as they are on an open coast, would afford but poor shelter to vessels moored inside. The new mole at Gibraltar is far higher than Madras Harbour walls, but a man-of-war moored close under it, in a common winter gale, tore out the massive fastenings. The dock wall at Suez is fully as high as that at Madras, yet in the small and low steamer *Baroda*, in only a fresh southerly breeze, we dragged the mooring buoys home, and were only saved from severe damage by the Company's lighters intervening. In the Calcutta cyclone of 1864 the lower masts were blown out of one of Company's steamers at moorings. Can Mr. Parkes possibly suppose that any steamer would willingly remain in Madras Harbour during a cyclone? and in the gales which prevail at that season, and which may or may not assume cyclone movements of force, there would be the greatest risk and difficulty in extricating a ship from tiers and pointing her fair for going out."

"When we see the proposed warehouses erected on the future quay, and they and the walls stand through a real cyclone hurricane and sea (which I much doubt if they ever will) it will be time enough to treat it as a close harbour, and moor ships as if in the London docks. If we are in the meanwhile to use the harbour I strongly advocate the moorings being laid down as in original plan. We have however to consider that the P and O steamers will be then not mail steamers, and therefore the many other large steamers frequenting Madras will claim equal conveniences with ourselves, and that there are only two moorings at which ships of 400 feet could swing. Unless it were made absolutely compulsory for me I would not go inside in bad weather. I would prefer to utilize the harbour by anchoring as close to entrance as possible, (north or south according to time of year and whether cargo was to be discharged or taken in,) and the cargo boats could then, unless in very exceptional weather, pass to and fro between harbour entrance and steamer without difficulty, and load or discharge their cargoes inside. I have to consider that the *Mirzapore* for instance is nearly 400 feet in length, and with a draft of 22 to 23 feet carries her way and great momentum for long; that the bow of such a ship would be in still water for some time while her quarter was exposed to the full action of the current, and that it would be necessary not only to shoot her through entrance with great way on her, but also to keep screw turning ahead, to keep her head straight from action of current, and that when in, and turning astern full speed, her head would come up about four points and the ship shoot considerably ahead in that direction before momentum taken off."

"With the buoys laid down as in Mr. Parkes original plan we might fetch in to the northern buoy (450 feet circle), but I think it would be advisable to have a hawser boat at the buoy ready to run a guess-warp off to the ship."

Captain White, S.S. "Peshawar."—"In reply to your letter of the 30th April with regard to the harbour of Madras, I beg to state that I am of opinion that there should be two entrances from the north and south, instead of one entrance from the east, so that vessels could enter against the current; with the original straight entrance from the eastward, or even with the proposed projecting entrance, there would be considerable risk of vessels being cut down upon the pier heads, going as they must necessarily do as slow as possible, and with the current setting

directly across the mouth of the harbour. I also think that the harbour would be more sheltered if closed to the eastward, as from observation I have noticed that the wind and swell invariably set in from the eastward, with the afternoon breeze during both monsoons; it would also be a greater protection during a cyclone swell, though I doubt very much if, on such an exposed coast, the harbour will afford sufficient protection during a cyclone, or from the severe gales of the north-east monsoon, to induce any vessels to remain there that could possibly put to sea."

"With regard to the utility of the harbour, no doubt it will afford great facilities for shipping and discharging cargo in ordinary weather, but I do not think it would be advisable ever to attempt to enter at night, for I have often found great difficulty even in picking up an anchorage in the roads, owing to the currents which run very strong at all seasons of the year."

Captain Rennoldson, S.S. "Hydaspes."—"In reply to your letter of yesterday's date, requesting my opinion as to the best form of entrance to the new harbour at Madras now under construction, I beg to report that I consider the entrance marked on chart of proposed moorings 550 feet apart the best, as it gives a good angle either way."

"Movable buoys would not affect our ships, for I do not think any of our ships would remain in there to await a cyclone."

"There will be no difficulty after the harbour is finished in getting boats out quickly to discharge and take in cargo should there not be a great quantity; with a large quantity I should think it best to go inside."

Captain Angove, Marine Superintendent.—"I have the honor to acknowledge your letter of 3rd instant, calling upon me for my opinion as to the best form of entrance for the new harbour now constructing at Madras, and my views generally as to the utility of the harbour when completed in regard to the Company's traffic at that port."

"Firstly, as to the plan of Mr. Parkes. The advantage of the projecting over the original straight form of entrance appears to me obvious. I am of opinion that projecting piers will prevent the cross current from acting so directly on the after-part of a long ship while making the entrance, than the original intended form would do. I have found the current in the month of December, when lying in the roads in 7½ fathoms of water as near as possible in a line with the proposed entrance, to be running at the rate of two to three knots an hour, this fact and taking into consideration the increased length of ships is, I think, a very important element in the adoption of the modified form of entrance."

"During my visits to the port of Madras, which have been frequent, and especially since the beginning of the construction of the new harbour, I have had opportunities of making many observations on the progress in the work; and in reference to the desired object it occurred to me that there should be two entrances at points that could be taken according to the monsoon in the direction that ships have to take when making for an anchorage, but the projecting piers with a wide entrance seem somewhat to compensate for the double entrance and exit."

"The advantage of the additional space afforded for bringing up anchoring, mooring to buoy or otherwise by the modified form needs no comment."

"Secondly, as to the utility of the new harbour for the Company's traffic. There does not appear to me to be any doubt as to the advantage that will be gained in discharging and receiving passengers and cargo, such work carried out in the open roads is conducted at certain seasons with risk and difficulty; at times communication with the shore is altogether suspended. Under shelter as a matter of course a ship would get quicker despatch and the cargo landed in a better condition. I have myself seen lighters of cargo from the ship during the north-east monsoon with a strong current running unable to fetch the pier and in consequence strand on the beach and seriously damage the cargo in them."

"Generally I cannot help thinking that the power of resistance of such works as are under construction at Madras in a cyclone, or lapse of time, must remain an open question; it is known by experience that breakwaters and piers on an open coast have been damaged severely by heavy seas."

"In the event of a cyclone approaching, I would recommend all ships that could do so to put to sea until such time as the resistance of the construction against such should be proved."

"Lastly, I do not see that the making such a harbour day or night with the projecting piers and the additional width of entrance as shown in modified plan would be attended with greater difficulty or risk than is experienced at other ports entered by the Company's ships in ordinary weather. In these last remarks I have given due consideration to the winds and currents experienced in Madras roads."

Captain Murray, S.S. "Nepaul."—"In accordance with your wishes I beg leave to submit a few remarks on the new harbour of Madras, and the utility of the scheme, when completed, in regard to the Company's traffic at the port."

"As it is needless raising objections to the plan of the harbour now I shall confine myself to the question of the entrance."

"Carrying the arms of the sea-face out from the straight line of the original plan, with a wider entrance, the alteration proposed is, in my opinion, a necessary improvement, for the following reasons, viz. :—

- "(1.) On entering it will be possible to head up a little to the current, which sometimes will be very strong across the entrance, and consequently there will be less risk in entering.
- "(2.) There will be more room inside for bringing a ship up that has entered with a good deal of way on, and it will be necessary to enter at a high rate of speed when it is found that the current is strong.
- "(3.) The shelter from the north-eastern face will be better, as long as it lasts, when the north-easterly swell of cyclones passing to the northward comes in. Most of the cyclones in the Bay of Bengal strike the coast north of Madras, about Cocanada and Vizagapatam, the swell of which runs heavily in on the Madras beach, lasting sometimes for a day or two, without any storm at Madras. As the ultimate object to be attained in Harbour Works is to place the ship alongside a wharf, and a railway alongside the ship, it matters little to the Company's work what the harbour is if cargo boats have to be used, except in so far as the water is smooth or otherwise alongside the ship. The question of the safety of the ship is another matter; and although it is almost certain that work could be carried on in the new harbour of Madras, when completed, at times when without the harbour work would be impossible, yet it is an open question with me whether I should remain inside the harbour under conditions similar to those which we experienced early in December last. A cyclone was threatening, with a heavy sea running in, and for three days we were unable to discharge anything. Had the harbour been completed we should have *worked*, supposing the ship could have got in, but every evening we must have gone out, for I entirely disagree with Mr. Parkes in paragraphs 13, 14, and 15 of his report to the Government of Madras; believing that when a true cyclone bursts on Madras his sea-wall will go to pieces; and although a ship would probably hold on, yet, in my opinion, it would be safer to be outside.

"Generally much advantage will be obtained from the harbour in discharging and in loading export cargo into the cargo boats, but whether the advantages will be commensurate with the increase of port dues I am unable to say. The moorings marked C on the plan would be the best for the Company's ships, as they will be more sheltered there from the E.N.E. and north-east swell which usually precedes cyclones in the Bay.

"The moorings marked D should not be put down."

Captain Woolcott, S.S. "Pekin."—"I am in receipt of your letter and accompanying papers concerning Madras Harbour, which I have perused. I am reluctant to give my opinion in the face of practical engineering; but after seeing the results of the cyclone of 1867, when ships were embedded in sand only a few days after being stranded, I formed my opinion which has never altered. That the Madras Harbour is impracticable, and if it could be made to stand I consider no ship could run for it in heavy weather when there would naturally be a rolling, breaking sea. While to ensure safety to your own ship by keeping way on her might be disastrous to those inside of the entrance."

This letter was considered to deal with the subject in rather a meagre way, and upon referring again to Captain Woolcott, he wrote back as follows :—

Captain Woolcott, S.S. "Pekin."—"I am in receipt of your letter of the 7th instant, referring to Madras Harbour, and regret that you should think my information "meagre." I can only repeat my views on the subject which are that the Madras Harbour is impracticable. It is the old story of the man building a house on the sands, the Engineers will, or may, say, "we have got down to a good foundation," so they may; but when they get their structure up there comes the silting up of sand, and they must continually dredge, and this would be almost impossible with a constant rolling sea.

"When we remember how tons of solid stone were thrown over Dover pier, how can we expect such a structure as Madras Harbour to stand a severe hurricane. I can only form my views from practical observation."

No. 188. ORDER THEREON, 29th July 1879, No. 1,971 W.

The foregoing letter gives cover to the opinions expressed by several Commanders in the P. and O. Company's service in regard to the proposed modification in the form of harbour entrance.

Captain Tomlin thinks the change of form would be an improvement, and render the entrance more easy of access.

Captain Parish thinks the alteration would be advantageous.

Captain White does not give an opinion on the point, as he advocates a double entrance.

Captain Rennoldson approves the modification.

Captain Angove considers the advantage of the projecting form of entrance obvious.

Captain Murray thinks the alteration a necessary improvement.

Captain Woolcott gives no opinion.

The remarks made in connection with the moorings will be communicated to the Master Attendant.

2. Ordered that the replies be forwarded to the Secretary of State in continuation of previous correspondence, for the information of Mr. Parkes, and that the thanks of Government be conveyed to the Directors of the P. and O. and B. I. S. N. Companies for the attention which they have paid to the request for opinions on Mr. Parkes' proposals.

(Here enter Nos. 1,972 and 1,973 W., dated 29th July 1879).

(True Extract.)

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

To the General Superintendent, Madras Harbour Works.
" Secretary Harbour Committee.
" Marine Department.

Esd S. T. Austin.
Spare Copies

BUILDINGS AND ROADS,
CIVIL WORKS.

Govt. of [1879] Madras.

PUBLIC WORKS.

To
THE GENERAL SUPERINTENDENT,
MADRAS HARBOUR WORKS,

cc. cc. cc.

Dated July 1879.

Issued

Recd.

Encl.

G. O., 29th July 1879, No. 1,971 W.

JULY.

Nos. 187-189.

Form of entrance of the Madras Harbour.—
Papers containing the opinions expressed by
several Commanders in the P. and O. Com-
pany's service in regard to the proposed
modification in the —, forwarded to the
Secretary of State for the information of
Mr. Parkes, and the thanks of Government
conveyed to the Directors of the P. and O.
and P. I. & N. Companies for the attention
which they have paid to the request.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads,
Civil Works.

No. 1,972 W.

No. 189.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
Public Works Department,

TO

THE AGENT OF THE P. AND O. S. N. COMPANY.

SIR,—I am directed to acknowledge your letter of the 11th July, concerning
copies of the opinions given by several Commanders in the service of the P. and O.
S. N. Company, in respect to the proposed modification in the form of the Madras
Harbour entrance, and in reply to communicate the thanks of this Government for the
attention which has been paid to their request for opinions on the proposal made by
Mr. Parkes.

I have the honor to be,

Sir,

Your most obedient servant,

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

OOTACAMUND,
29th July 1879.

Exd. S. T. Austin.
Spare Copies

1971673
4

BUILDINGS AND ROADS
CIVIL WORKS

Govt. of (1879) Madras.
PUBLIC WORKS.

To

THE AGENT OF THE P. AND O. S. N.
COMPANY

Dated July 20th.

Issued

Recd.

Encl.

G. O., 29th July 1879, No. 1,972 W.

JULY.

No. 189.

Conveys the thanks of Government for the attention which has been paid to their request for opinions on the proposed modification in the form of the Madras Harbour entrance.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads,
Civil Works.

No. 1,973 W.

No. 190.

FROM

THE SECRETARY TO THE GOVERNMENT OF MADRAS,
Public Works Department,

TO

THE MANAGING AGENTS, B. I. S. N. COMPANY.

GENTLEMEN,—I am directed to acknowledge your letter, No. 220 of the 12th April last, and in reply to communicate the thanks of this Government for the attention which has been paid to their request for opinions on the proposal made by Mr. Parkes.

I have the honor to be,

Sir,

Your most obedient servant,

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

OTTACAMUND,
29th July 1879.

Encl S. T. Austin.
Spare Copies

BUILDINGS AND ROADS,
CIVIL WORKS.

Govt. of (1879) Madras.
PUBLIC WORKS.

THE MANAGING AGENTS,
P. I. S. N. COMPANY.

Dated July 20th.

Forwarded

Recd.

Encl.

G.O., 29th July 1879, No. 1173 W.

JULY.

No. 190.

Conveys the thanks of Government for the attention which has been paid to their request for opinions on the proposed modification in the form of entrance to the Madras Harbour.

MADRAS.

Peninsular & Oriental Steam Navigation Company,

11th July 1879.

The Secretary to Government
Public Works Department
Madras.

Sir

Referring to your letter of the 4th March last requesting me to transmit to my Directors a letter (with enclosures) No. 664 W dated 8th March last regarding the proposed modification in the form of the entrance to the Madras Harbour, I have now the honor to forward herewith copies of the opinions of several of the Commanders in this Company's service, which were received from Head Office by yesterday's mail.

My Directors remark in their letter to me that some of the Commanders have not confined themselves to the question of the entrance but have dealt with

with the subject of the whole scheme;
they considered it best however to
send the letters as received from
the Commanders and have de-
sired me to forward in the same
to the Government.

I have the honor to be

Sir

Your Obedient Servant

G. King

Acting Agent.

197/673
9

40. 11. 58. 5-3-49
 110 5-3-49
 Memo Despatch No 9 of 1849
 do 33- 11.6.79
 G.O. 1575 W. 7.6.79

Recd 9.27.79 1971

Recd, 15/7/79

187

Cir 17.7.79. Recd 24.7.79
 To Secy 12-4

Madras

192/6023
 10

Madras Harbour

183

The Government of
 Madras having requested to be favour-
 ed with an opinion upon the pro-
 posed modification in the form of
 Harbour Entrance from such of the
 Commanders in the Service as may
 be possessed of the greatest experience,
 I have submitted the papers and
 plans to seven of those gentlemen,
 and their opinions are herewith
 severally recorded

W. L. S. L.

June 20/79

" Captain Tomlin. s.s. "Malwa."

After carefully consider-
 ing your letter and the enclosed re-
 port to the Madras Government
 on the new Harbour, now in con-
 struction at Madras. I am of opinion
 that the proposed change of form
 in the entrance from a straight, to
 a projecting line, with an increase
 in width of 100 feet would be an
 improvement and would render
 the entrance more easy of access.

During the bad weather
 of the N.E. monsoon a vessel in enter-
 ing the harbour would have the
 wind and current on her star-
 board beam and her course of pro-
 ceeding would be to round the

2.

North Pierhead closely, and with her
helm to Port endeavour to ^{reach} as far into
the N.E. corner, or to windward, as
possible, before letting go the anchor.

Modern Steamers are of
so great a length that good way
would have to be kept whilst enter-
ing to avoid being swept down
upon the lee pier head, and as the
outward angle of the pier would
tend to deflect the current, it
would act more on the quarter
as the bow left its influence, the
result being, to bring the ship
more in line with the outer wall
of harbour when she reached the
inside. In summer when the
southerly winds and currents
prevail the South pier would have
to be approached in like manner.

In fixing the position
of mooring buoys, sufficient space
will I presume, be left between
them and the outer wall so as
to allow for a vessel being set a
little to leeward before her anchor
brings her up in swinging.

If the harbour when
completed affords a sheltered area,
where cargo boats can pass to and
fro, to load and discharge at the
pier or beach in all weather it
would cause an immense saving

1971/873
2
3.
of time, which is of such importance to Mail Steamers; to say nothing of the saving in damage to cargo, and I may state in conclusion, that on my last voyage to Calcutta in December 1844, I was detained at Madras 42 hours, discharging an amount of cargo, that could easily have been discharged in 12 hours at a port or river where the boats could have laid alongside in quietness.

Captain Parish. s. s. "Singapore"

I concur in much that Mr. R. Baldrey advances and I share with him the fears of future results but as the S & N walls are already so far advanced and connected with the shore, it seems unnecessary now to consider his proposals; and for the same reason, as the harbour will possibly soon be an accomplished fact, and we must accept the inevitable, I refrain from any remarks as to the necessity or otherwise of it, or its doubtful advantages over the pier, as it is, or rather as it was before the harbour works silted up the shore line, when the largest steamers could anchor with safety, within $1\frac{1}{2}$ ships lengths of Pier End and

boats load and discharge cargo at
Pier far outside any surf.

I will merely state my
opinion that in fine weather it
was not wanted, and in really bad
weather I should be very sorry to
have to enter or leave it. I proceed
then to consider Mr. Parkes' proposed
modification of entrance and the
arrangement of buoys.

I consider that the proposed alter-
ation in form of entrance is ad-
vantageous as giving -

1st Greater width of entrance

2nd More space before approaching
mooring.

3rd A more favourable angle for
for the current to strike the
ship when entering.

Mr. Parkes writes of "vessels being re-
tained in safety within the
harbour during byclones" His idea
of the forces and effects of byclone
winds of seas, differ widely from my
own experiences. Even if the sea
walls stood, I believe that vessels
inside would be ground up to-
gether in one mass against the
lee wall, to repeat the process on
the opposite one when the shift
of wind came. Such sea walls,
placed as they are on an open
coast would afford but poor

Contract before
marked on page 11
of Mr. Parkes's report
of Nov. 1873

197/53
16
SP 7
5.
shelter to vessels moored inside. The new mole at Gibraltar is far higher than Madras Harbour walls, but a man of war moored close under it, in a common winter gale, tore out the massive fastenings. The dock wall at Suez is fully as high as that at Madras, yet in the ~~the~~ small and low steamer Baroda in only a fresh South by breeze we dragged the mooring buoys home and were only saved from severe damage by the Co's lighters intervening. In the Calcutta cyclone of 64 the lower masts were blown out of one of Co's steamers at moorings. Can Mr. Parkes possibly suppose that any steamer would willingly remain in Madras Harbour during a cyclone? and in the gales which prevail at that season, and which may, or may not assume cyclone movements of force, there would be the greatest risk and difficulty in extricating a ship from tiers and pointing her fair for going out.

When we see the proposed warehouses erected on the future Quay and they and the walls stand through a real cyclone hurricane and sea (which I much

197/623
6.
doubt if they ever will) it will
be time enough to treat it as a
close harbour, and moor ships as
if in the London docks. If we are
in the meanwhile to use the
harbour I strongly advocate the
moorings being laid down as in
original plan. We have however
to consider that the P & O steamers
will be then not mail steamers
and therefore the many other
large steamers frequenting
Madras will claim equal con-
veniences with ourselves and
that there are only 2 moorings
at which ships of 400 ft could
swing. Unless it were made ab-
solutely compulsory ^{for me} I would
not go inside in bad weather.
I would prefer to utilize the harbour
by anchoring as close to entrance
as possible (N. or S. according to
time of year and whether cargo
was to be discharged or taken in)
and the cargo boats could then
unless in very exceptional weather
pass to and fro between harbour
entrance and steamer without
difficulty, and load or discharge
their cargoes inside. I have to con-
sider that the Mirzapore for
instance is nearly 400 ft in length
and with a draft of 22 to 23 feet

1971/673
16
SP 9 7.
carries her way and great momen-
tum for long, that the bow of such
a ship would be in still water for
some time while her quarter was
exposed to the full action of the
current & that it would be necessary
not only to shoot her through
entrance with great way on her,
but also to keep screw turning
ahead, to keep her head straight
from action of current - and that
when in, and turning astern
full speed, her head would come
up about 4 Points and the ship
shoot considerably ahead in that
direction before momentum
taken off.

With the buoys laid down
as in Mr. Parkes original plan
we might fetch in to the Northern
buoy (450 feet circle) but I think
it would be advisable to have a
hawser boat at the Buoy ready to
run a guess-warpe off to the ship.

Captain White. s.s. "Peohawer"

In reply to your letter
of the 30th April with regard to
the Harbour of Madras, I beg to
state that I am of opinion that
there should be two entrances from
the North & South, instead of

one entrance from the east, so that vessels could enter against the current: with the original straight entrance from the eastward, or even with the proposed projecting entrance, there would be considerable risk of vessels being set down upon the pier heads, going as they must necessarily do as slow as possible, and with the current setting directly across the mouth of the harbour. I also think that the harbour would be more sheltered if closed to the eastward, as from observation I have noticed that the wind and swell invariably set in from the eastward with the afternoon breeze during both monsoons. It would also be a greater protection during a cyclone swell, though I doubt very much if, on such an exposed coast, the harbour will afford sufficient protection during a cyclone, or from the severe gales of the N. E. monsoon, to induce any vessels to remain there that could possibly put to sea.

With regard to the utility of the harbour, no doubt it will afford great facilities for ship-

1891/5/8 SP 11 9.
ing and discharging cargo in ordinary weather, but I do not think it would be advisable ever to attempt to enter at night, for I have often found great difficulty even in picking up an anchorage in the Roads, owing to the currents which run very strong at all seasons of the year.

Captain Pennoldson
s.s. "Hydaspes"

In reply to your letter of yesterday's date requesting my opinion as to the best form of entrance to the new harbour at Madras now under construction I beg to report that I consider the entrance marked on Chart of proposed Moorings 550 feet apart the best, as it gives a good angle either way.

Moveable buoys would not affect our ships for I do not think any of our ships would remain in there to await a cyclone.

There will be no difficulty after the harbour is finished in getting boats out quickly to discharge & take in cargo should there not be a great quantity; with a large quantity I should think it best to go inside.

197/673
19
12 10.
Captain Angove. Marine Super^{ndt}

I have the honor to acknowledge your letter of 3rd inst calling upon me for my opinion as to the best form of entrance for the new harbour now constructing at Madras & my views generally as to the utility of the Harbour when completed in regard to the commerce traffic at that port.

Firstly: as to the plan of Mr. Parkes. The advantage of the projecting over the original straight form of entrance appears to me obvious I am of opinion that projecting piers will prevent the cross current from acting so directly on the after part of a long ship while making the entrance than the original intended form would do. I have found the current in the month of December when lying in the Roads in $4\frac{1}{2}$ fms. of water as near as possible in a line with the proposed entrance to be running at the rate of Two to Three Knots an hour, this fact & taking into consideration the increased length of ships is I think a very important element in the adoption of the modified form of entrance.

During my visits to the Port

97/1823
26
11.
of Madras, which have been frequent & especially since the beginning of the construction of the new harbour: I have had opportunities of making many observations on the progress in the work: & in reference to the desired object it occurred to me that there should be two entrances at points that could be taken according to the Monsoon in the direction that ships have to take when making for an anchorage, but the projecting piers with a wide entrance seem somewhat to compensate for the double entrance & exit.

The advantage of the additional space afforded for bringing up anchoring mooring to barge or otherwise by the modified form needs no comment.

Secondly, as to the utility of the new Harbour for the Company's traffic there does not appear to me to be any doubt as to the advantage that will be gained in discharging & receiving passengers & cargo, such work carried out in the open Roads is conducted at certain seasons with risk & difficulty: at times communication with the shore is altogether suspended. Under shelter as a matter of course

12
1971/573
21
a ship would get quicker dis-
patch & the cargo landed in a
better condition, I have myself
seen lighters of cargo from the
ship during the N.E. Monsoon
with a strong current running
unable to fetch the pier & in
consequence strand on the
beach and seriously damage
the cargo in them.

Generally I cannot help
thinking that the power of re-
sistance of such works as are
under construction at Madras
in a cyclone, or lapse of time
must remain an open question
it is known by experience that
Breakwaters & Piers on an open
coast have been damaged severely
by heavy seas.

In the event of a bye-
lone approaching I would re-
commend all ships ^{that} could do so
to put to sea until such time
as the resistance of the construc-
tion against such should be
proved.

Lastly I do not see that
the making such a harbour
day or night with the projecting
Piers & the additional width of
entrance as shown in modified
plan would be attended with

1971573
22.
JP 15-13.
greater difficulty or risk than is experienced at other Ports entered by the Company's Ships in ordinary weather, in these last remarks I have given due consideration to the winds & currents experienced in Madras Roads.

Captain Murray. s.s. "Nepaul"

In accordance with your wishes I beg leave to submit a few remarks on the new harbour of Madras, & the utility of the scheme, when completed, in regard to the Company's traffic at the port.

As it is needless raising objections to the plan of the harbour now I shall confine myself to the question of the entrance.

Carrying the arms of the sea face out from the straight line of the original plan, with a wider entrance, the alteration proposed - is in my opinion, a necessary improvement, for the following reasons. viz -

1. On entering it will be possible to head up a little to the current which sometimes will be very strong across the entrance: and consequently there will be less risk in

14.
entering.

2. There will be more room inside for bringing a ship up that has entered with a good deal of way on - and it will be necessary to enter at a high rate of speed when it is found that the current is strong.

3. The shelter from the N. eastern face will be better - as long as it lasts - when the N. easterly swell of cyclones passing to the Northward comes in. Most of the cyclones in the Bay of Bengal strike the coast North of Madras about

Coconada and Vizagapatam, the swell of which runs heavily in on the Madras beach, lasting sometimes for a day or two, without any storm at Madras. As the ultimate object to be attained in Harbour works is to place the ship alongside a wharf, & a railway alongside the ship, it matters little to the Company's work what the harbour is if cargo boats have to be used, except in so far as the water is smooth or otherwise alongside the ship. The question of the safety of the ship is another matter, and although it is almost certain that work could be carried on in the new harbour of Madras, when

15.
DP 17
1971/523
24
completed, at times when without the harbour work would be impossible, yet it is an open question with me whether I should remain inside the harbour under conditions similar to those which we experienced early in December last. A cyclone was threatening, with a heavy sea running in & for three days we were unable to discharge anything. Had the harbour been completed we should have worked, supposing the ship could have got in, but every evening we must have gone out, for I entirely disagree with Mr. Parkes in paragraphs 13, 14 & 15 of his report to the Governor of Madras, believing that when a true cyclone bursts on Madras his sea wall will go to pieces: and although a ship would probably hold on, yet in my opinion it would be safer to be outside.

Generally much advantage will be obtained from the harbour in discharging & in loading export cargo into the cargo boats, but whether the advantages will be commensurate with the increase of port dues I am unable to say. The moorings marked C on the plan would be the best for the Company's ships, as they will be

more sheltered there from the E.N.E.
+ North East swell which usually
precedes cyclones in the Bay.
The moorings marked D should
not be put down.

Captain Woolcott. s.s. "Pekin"

I am in receipt of
your letter and accompanying
papers concerning Madras harbour
which I have perused, I am re-
luctant to give my opinion in
the face of practical Engineering,
but after seeing the results of the
Cyclone of 1864 when ships were
embedded in sand only a few
days after being stranded I
formed my opinion which has
never altered. That the Madras
harbour is impracticable & if it
could be made to stand I consid-
er no ship could run for it in
heavy weather when there would
naturally be a rolling breaking sea.
While to ensure safety to your own
ship by keeping way on her might
be disastrous to those inside of
the entrance.

This letter was considered to deal
with the subject in rather a
meagre way and upon referring

again to Captain Woolcott he
wrote back as follows. —

Captain Woolcott. s.s. "Pekin."

I am in receipt of your
letter of the 4th inst. referring to
Madras harbour and regret that you
should think my information
"meagre" I can only repeat my
views on the subject which are that
the Madras harbour is impractic-
able. It is the old story of the man
building a house on the sands, the
engineers will, or may say, "we
have got down to a good found-
ation" so they may, but when they
get their structure up there comes
the silting up of sand and they
must continually dredge and
this would be almost impossible
with a constant rolling sea.

When we remember how tons
of solid stone were thrown over
Dover pier how can we expect
such a structure as Madras
harbour to stand a severe hurri-
cane. I can only form my views
from practical observation.

197/16-73
25

197/16-73
No. 197/16 Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 29th July/79
Read the following:—

From the Agent,
P & O S. Co.
dated 11th July 1879.

Order thereon.—

The foregoing letter gives cover to the opinions expressed by several Commanders in the Company's Service in regard to the proposed modification in the form of Harbour entrance.

Capt. Tomlin thinks the change of form would be an improvement, and render the entrance more easy of access.

Capt. Parich thinks the

OK

I think we should thank the
Agent for attending to our
requests for
Opinions
Cir 17-7-79
12-7-79

Yes 16/22/79

alteration would be advantageous.

Capt White does not give an opinion on the point, as he advocates a double entrance

Capt. Renboldson approves the modification.

Capt. Angove considers the advantage of the projecting form of entrance obvious.

Capt. Murray thinks the alteration a necessary improvement.

Capt. Woolcott gives no opinion.

[Some of the Captains discuss the stability and usefulness of the harbour when completed. Opinions diametrically

1971/573
28

21
opposed to theirs have been held by others equally competent to judge, and the Government have no intention of reopening the matter.

The remarks made in connection with the moorings will be communicated to the Master Attendant.

Ordered that the copies be forwarded to the Secy of State per continuation of previous correspondence, for the information of Mr Parker,

ASP

16/7

Att

Capt. M. A. Works
Marine Dept.
Secy: Harbour Committee

16/7/74

and that the Secy of Gaol. be conveyed to the Directors of the P.O. & C.P. for their attention which they have

paid to the request
for opinions on Mr
Parker's proposals

1879

24/7

Mt

24/7/79

Mr. A.

Mr. B.

Genl. Secy. M. H. Park,
Secy. Harbour Committee,
Marine Dept.

1971/873
29

1879.

P. 22

To No 1972 W of 29th July 79
The Agent of the
P & O S. S. Co.

Sir,

I am directed to
acknowledge your letter
of the 11th July, concerning
copies of the opinions
given by several Com-
manders in the service
of the P & O S. S. Co.,
in respect to the pro-
posed modification
in the form of the
Madras Harbour En-
trance, and in reply
to communicate the
thanks of this Govt.
for the attention which
has been paid to
their request for opinions
on the proposals
made

Despd
18-79

by Mr. Parkes

No. 1973 Was 29th July 79
The Managing Agents
B. S. S. & Co.

Gentlemen

I am directed to acknowledge your letter No. 220 of the 12th April last, and in reply to communicate the thanks of this Government for the attention which has been paid to their request for opinions on the proposal made by Mr. Parkes.

Desd
6-8-79

Wt
20/7/79

Home
P. W. DEPARTMENT 1879-80.
Despatch
MEMORANDUM.

Current No. _____
Letter Number _____
dated the _____
from the Supg. Engineer of _____
My Lord, 15/8/79

In continuation of our Despatch No. 33, Public Works, of the 11th June, we have the honor to forward copy of our original Proceeding in which are recorded the opinions of the Commanders in the Peninsula and Oriental Company's Service who have been consulted in reference to the proposed change in the form of harbour entrance.

2. Your Lordship will observe that of the five Commanders who express a decided opinion on the subject all agree in considering

Home
The General in Command

For order
Wt. 15/8
With reference to the accompanying Despatch signed in yesterday's Council it seems that the last para has been rendered unnecessary by the receipt with last home mail of a letter from the S. & S. giving cover to the opinion of the Elder Brethren of the Trinity House expressing approval of the proposed change in the form to be given to the entrance of the London Harbour. Although this was not perhaps the strictly professional opinion

Sentiment

ABP

24/7
Decr. 7
6.8.79

20/7/70

the proposed modifications
most desirable.

3. We have received your Lordship's Despatch bearing date the 10th July. No. 17. forwarding copy of a Communication from the Elder Brethren of the Trinity House. Their opinion confirms the views expressed by the practical authority who have been consulted by us, and we have accordingly sanctioned the proposed change of design. of
~~behave~~ ~~situation~~

In 5 days. 15/8.
Secy. of State.

Cir 9.8.79. Ret 18.8.79.
P.L. Steel 15 Augt

For ordering

With reference to
the accompanying despatch
Signed in yesterday's
Council it seems that
the last para has been
rendered unnecessary
by the receipt with
last home mail of
a letter from the S of S
simply concurring to the
opinion of the Elder
Brethren of the
Trinity House expressing
approval of the proposed
change in the form to
be given to the entrance
of the London Harbour
Although this was
not perhaps the strictly
professional opinion

looked for yet
it may be and an-
-dished desirable to
Substitute for the
Despatch one which
shall either omit
entirely para 3 or
Substitute for it an
acknowledgment of
the receipt of the
above opinion of
the Elder Brethren

Att

9/1/79

Geo. W. A.

11/1/8

1921/6-23
32

C 1921

To
The Secy of State
For India
My Lord,

In continuation of
our Despatch No 33
P.W. of the 11th June,
we have the honour to
forward copy of our
Marginal Proceedings,
in which are recorded
the opinions of the
Commanders in the
P. & O. Co's Service
who have been con-
sulted in reference
to the proposed change
in the form of Harbour
entrance.

Your Lordship will
observe that of the five
Commanders who
express a decided
opinion on the subject

No. of

all agree in considering
the proposed modifica-
tion most desirable.

We shall be glad to
receive at an early
date the professional
report which we have
requested your Lord-
ship to obtain.

GP
24/7

Wt

24/7/75

Despatch No. 9 dated
11 May/79

Agent of the P.O.S. & Co)
 Express the ^{officer} thanks for
 the attention which has
 been paid to their request
 of Govt. for its opinion
 on the proposed modifica-
 tion in the form of the
 Madras Harbour Entrance

(Agent P.O.S. & Co)
 Express the thanks of
 Govt for the attention which
 has been paid to their re-
 quest for opinion on the
 proposed modification
 in the form of entrance
 to the Madras Harbour.

(Sof S) Madras Harbour
 Command Prop recording
 the opinions of the Commanders
 in the P.O. Company's service
 in reference to the pro-
 posed change in the form
 of entrance to the Madras
 Harbour, and requests
 to be furnished at an early
 date with the professional
 report asked for.

Cr 3218

 Capt. of (1879) Madras.
 PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O. 29 July

1879, No.

1971

1972

1973

Nos 187-190

Form of Entrance of the
Madras Harbour. Paper
 containing the opinions
 expressed by several Com-
 mndrs in the P.O. Company's
 service in regard to the
 proposed modification
 the — forwarded to the Sec-
 of State for the informa-
 of Mr. Parker; and the
 thanks of Govt conveyed
 to the Directors of the P.O.
 & B. S. B. Companies for
 the attention which they
 have paid to the request
 (P.O.)