MADRAS RECORD OFFICE.
Government Records.

Public Works Department.

G. O. (Printed).
Dated 14th January 1874
No. 93

193-84

Proceedings of the Madras Government, Public Works Department, 27th January 1874.

No. 363. Read the following letter from Major C. H. LUARD, R.E., Officiating Under Secretary to the Government of India, Public Works Department, (Guaranteed Railways,) to Colonel G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, (Railway,) dated Fort William, 17th December 1873, No. 2,174 G.R. :—

I AM directed to acknowledge the receipt of your letter, No. 2,783, dated the 17th November 1873, submitting a letter from the Consulting Engineer explaining certain entries in the Revenue Account of the Great Southern of India Railway for the second half of 1872.

2. In reply I am to explain that, under "railway materials for construc tion" in Abstract I. of Goods traffic, it is intended that only materials carried for the Company's own purposes should be included. Railway materials carried for other parties should be included with the general traffic.

No. 364. ORDER THEREON, 27th January 1874, No. 183.

RAILWAY, No. 51.

COMMUNICATED to the Consulting Engineer for Railways, with reference to G. O., No. 2,782, of 17th November 1873.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

To the Consulting Engineer for Railways.

Exd. E. C. Shunker.
Spare Copies

All communications should be addressed to the Secretary.

No. 2174 GR.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

Guaranteed Railways

To

The Secretary to the Govt of Madras.
Public Works Department
(Railway)

Fort William 17 December 1873

Sir

I am directed to acknowledge the receipt of your letter No 2783 dated the 17th November 1873, submitting a letter from the Consulting Engineer explaining certain entries in the Revenue Account of the Great Southern of India Railway for the 2nd half of 1872.

2. In reply I am to explain that under "Railway materials for construction" in abstract I of Goods traffic, it is intended that only materials carried for the Company's own purposes should be included. Railway materials carried for other parties should

be included with the General Traffic.—

I have the honor to be

Sir &c.

Govt. of 1874 Madras.

PUBLIC WORKS.

To The Consulting Engrs for Railways

Dated

Recd. — Encl.

G. 27 Dec 1873.

Nos. 363 & 364

Revenue Accounts. Letter from the Govt of Madras remarking on letter from the Consg Engrs explaining certain entries in the Account of Mr Ebell I Rly for the 2d half of 1872, comd to the Consg Engrs.

Proceedings of the Madras Government, Public Works Department, 26th January 1874.

Read the following:—

No. 347. *Memorandum by Captain A. D. TAYLOR on the Harbour for Madras.*

CONSIDERING Mr. Parkes' Report as quite exhaustive of the subject, and as conclusively demonstrating the superiority of an ENCLOSED HARBOUR with one eastern entrance, I might have let the question alone. But when we hear that "the principle of an enclosed harbour has been objected to ON NAUTICAL GROUNDS," it behoves me to explain that some nautical authorities think little of the principle of a detached breakwater, but expect much benefit from an enclosed harbour.

2. Speaking of a breakwater, Mr. Dalrymple says, "it is thus far a certainty—the roadstead inside of it cannot silt up." But of the enclosed harbour, he says, "it must be problematical."

3. I need hardly say that the breakwater is the doubtful thing. Many enclosed harbours are in existence, but there is not one instance of a straight breakwater lying off and parallel to a straight sandy shore. And I prefer the opinion of Mr. Robertson, C. E., that "there *may* be as much, if not more, danger from shoaling in the case of a breakwater as of an enclosed harbour."

4. I append to this memorandum a transcript of the Admiralty Chart of St. Mary's Island, east coast of Madagascar, as exhibiting a most remarkable natural breakwater, behind which, off the shore abreast, the sand has for centuries been accumulating into a point, which is by very slow degrees approaching the island; and we may reasonably conclude that precisely similar would be the operation of nature behind any detached breakwater in Madras Roads.

5. I repudiate the notion that on NAUTICAL GROUNDS there is an insuperable objection to such a form of harbour as Mr. Parkes proposes. If any objecting seaman would patiently examine his objections in the light of Mr. Parkes' able and exhaustive Report of November 4th, 1873, he would, I venture to think, find many of such objections groundless.

6. Precisely similar opposition was made to the Wet-dock scheme for Table Bay, Cape of Good Hope. And even after the docks were finished, it was the custom of some—even nautical men—to predict disaster to ships entering the harbour. But when once a ship Captain was found bold enough to att[illegible] an entrance with a large ship under sail, the ice was broken and others f[illegible]ST FORM *for* their own advantage.

7. I have no hesitation in declaring my belief that practical sea[illegible]ive a breakmake no fuss about entering or quitting Mr. Parkes' harbour; that in[illegible]that place presents no inferiority on that score to any form of breakwater whatever. I think that any *ideal advantages* which a vessel may have, in entering or quitting the shelter of a breakwater, are dependent upon the contingency of an *absence of any other vessels* to impede the progress of the incoming or departing ship. Now, for such a ship Mr. Parkes provides a clear open area, more than two cables' lengths across, within the mouth of his harbour.

8. I think that Mr. Parkes has conclusively demonstrated the superiority of his proposed enclosed harbour in every way:—

Firstly.—In the greater area of *real shelter* afforded by his harbour in comparison with that which a one mile straight breakwater can afford, (*see* paragraphs 20 to 22.)

Secondly.—That the breakwater WILL NOT (as suggested by Mr. Robertson) for an *equal sum* of money give much more *deep* water shelter than a harbour, (*see* paragraph 22.)

9. Let us look a little at the statement of Mr. Robertson, that "vessels can enter and quit more easily from behind a *breakwater* than through the one entrance of a harbour."

10. *Firstly.*—As to rounding the breakwater in the N. E. monsoon, November to March—the wind is from the sea, say, from any point between N. by E. and E. by S.—all that a sailing vessel can do is to anchor somewhere off the south end. Thence she must either be warped further in towards the centre, or be towed to a berth by a steam-tug. A steam-tug is preferable, warps will much hinder boat traffic.

11. It would never do to allow vessels to enter from the north whilst the current (as at that season) is running to south. At Calcutta the incoming steamers are *not allowed* to come up above Garden Reach on a flowing tide; whilst outward bound steamers (or ships with tugs) must move out from amongst the shipping only on the flood stream.

12. With the same wind a sailing vessel can easily enter the enclosed harbour, and drop anchor just inside. Then a warp will take her to her berth.

13. *Secondly.*—With a land wind from between N. W. and S. W. how could a ship with a W. by N. or W. by S. wind (with current running to north, as between May and September) venture to run in behind the *breakwater* from the south? How could she find room to round-to and anchor? She *must* then anchor to the north of the breakwater, and be brought in by a steam-tug.

14. With the enclosed harbour, ships arriving at the above time would anchor to leeward (either to north or to south) and wait for a tug to take them in.

15. *Thirdly.*—With the normal "alongshore" south winds, from mid February to April. The current then runs to the north, and vessels must not attempt to enter behind the breakwater from the south, but they can only anchor to the north of it and be towed in to a berth.

16. The same tactics are necessary for ships arriving under the same conditions of weather at an enclosed harbour.

17. *Fourthly.*—At the commencement of a cyclone, when the wind is between no[illegible]d north-west, vessels must anchor to *leeward* of the *breakwater*, and have a [illegible] to take them in. It would never do to allow them to run in from [illegible]ard at such times and to thread their way amongst the shipping (*see* [illegible]11). And it is certain that there would not be the ghost of a bit of [illegible]or them near the north part of a breakwater.

18. Now, if the vessel seeking shelter could fetch to windward of Madras, she might bear up for the *enclosed harbour* on a south-west course under easy sail, easily could make the entrance, and, when within it, would put the helm down and let go the anchor about 250 yards to W. by N. of the north pier head. A vessel could even do this at night if red and green lights marked the two pier heads, and if it were an understood rule that a clear space existed.

19. But supposing that the vessel, in the above case, could scarcely fetch the entrance. Under the lee of the enclosed harbour, the water would be smoother (for the operation of getting a hawser on board from a tug), than it could possibly be within the breakwater when the wind is blowing fresh from the N. by W. or the N. by E.

20. After the evidence which Mr. Parkes has collected as to the prevalence of northerly winds at the cyclonic periods, we have good reason for doubting any realization of Sir Arthur Cotton's idea that "the breakwater would leave the space

behind it exposed to a *ripple* from northerly or southerly winds, but *not to any swell.*" Every sailor who has anchored for shelter to leeward of an island (and surveyors have more experience of this than others) knows that his vessel is not exempt from the swell that rolls in round both sides of the island, causing her to roll, whilst the operation of landing (even along the island's lee side) is not such an easy thing after all. Anjideva Island near Carwar, and St. George's Islands off Goa, well illustrate this point. I could cite many other instances from my experience of the West Coast of India.

21. Mr. Parkes has well explained in paragraph 21 that during the north-east monsoon the sheltered part of the beach would only be near the lighthouse, instead of opposite the business part of the town. Now, if the one-mile breakwater be planted further northward to obviate this great objection, there would be no shelter at the site of the present Custom-house from the swell which rolls up from southward during the prevalence of the south-west monsoon in the Bay of Bengal. And here I most heartily endorse Mr. Parkes' remarks in paragraph 31, about "preponderance of northerly winds and direction of waves."

22. Now let me ask this question. If the area to be sheltered by the original one-mile breakwater of Sir A. Cotton and Mr. Robertson was not expected to suffer from any swell, why does Sir Arthur now speak of another form of harbour (noticed in paragraph 5 of the memorandum No. 75, signed by Colonel Walker, who states it as *probably a nautical requirement*), viz., "two perpendicular jetties with ends that should not be joined but covered with a breakwater parallel to the shore, leaving two openings, north and south, easy of access, and sheltered from the swell." This modification of the *breakwater* scheme transforms it into an *enclosed harbour.* But the entrance of such a harbour as this *cannot be* easy of access and at the same time sheltered from the swell.

23. Nor would it be convenient to let a merchant ship rush into the harbour and take up whatever berth she likes. Her berth must be settled by the Port Authorities, and it will be far more convenient that she should at first anchor outside and to leeward of the harbour, and from that position be taken in by a steam-tug.

24. Now we may say that the only question at issue is as to the BEST FORM *for* such *an enclosed harbour.* It is currently reported that Colombo is to have a breakwater, and the inference is that what Engineers have recommended for that place will suit Madras equally well. But the term *breakwater* for Colombo is merely applied to the very same thing which Mr. Parkes has proposed for Madras, viz., two piers starting from distant points of the shore, not meeting, but leaving a space between them of about 150 yards for the entrance of ships. There is this difference, that Colombo has a bay, whilst the shore line of Madras is a straight sand, but the principle adopted for both places is identical.

25. Now I have to notice a statement that it is "an imperative necessity to have the entrance protected by a breakwater." A similar prediction (which events have completely falsified) was made in the case of the docks at Table Bay, Cape of Good Hope. Some nautical men considered that, even through an opening of 300 feet, a considerable swell would sometimes roll in from the N. E. round the other long breakwater. But now the fact is established that each successive ocean-wave is completely broken against the vertical walls of the piers and cannot become *re-united* to make head again and to roll into the harbour. The original waves are effectually dispersed, and in the case of Madras Harbour the

small derivative undulations having to spread out over two right angles, will be speedily reduced to insignificance, as Mr. Parkes explains in paragraphs 60 and 61.

26. As to the *accommodation* which Mr. Parkes' harbour will give us, I quite agree with all that gentleman says in paragraphs 22, 40, and 41 of his Report. Upwards of 30 ships could be well accommodated. And sailing ships during the fine season—waiting (as they now do) for many weeks before they can get a cargo—will find a pecuniary advantage in waiting outside in the roads.

27. After a consideration of all conceivable contingencies, it seems to me that the SINGLE ENTRANCE according to Mr. Parkes' plan is the best, and it must also be the most economical. At any rate, the *moot question* of entrance need not delay the commencement of the two piers from the shore, whilst Sir Arthur Cotton and Colonel Walker agree with Mr. Parkes in the preliminary requisites of a closed harbour.

(Signed) A. D. TAYLOR,
Commander, late Indian Navy.

No. 348. ORDER THEREON, 26th January 1874, No. 175.

CIVIL WORKS, No. 25.

ORDERED that copies of this Memorandum be submitted for the information of the Secretary of State and of the Government of India, with reference to former correspondence and especially to Mr. Dalrymple's paper transmitted with Despatch No. 1, of 9th January 1874, also that the thanks of the Government be conveyed to Commander A. D. Taylor for his valuable contribution towards settlement of the question of the best form of harbour for Madras, placing before Government clearly as it does the relative advantages in a nautical point of view of a breakwater and closed harbour with single eastern entrance, so far as regards their accessibility of entrance at different seasons.

2. Copy of Mr. Dalrymple's further remarks on Mr. Parkes' scheme will be supplied to Commander Taylor for his information, and he will be requested to favour the Government with his views as to any additional protection he may think necessary for ships in Mr. Parkes' harbour, and as to the best method of mooring them, having regard to the attainment of the utmost capacity consistent with safety.

(True Extract.)
(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

No. 348A. (DOCKET No. 175A, dated 26th January 1874.)

COPY of the above forwarded to the Government of India.

(True Extract.)

Colonel, R.E.,
Secretary to Government.

Exd. S. T. Austin.

Spare Copies

Memorandum by Captain A. D. Taylor on the Harbour for Madras.

Considering Mr. Parkes' Report as quite exhaustive of the subject and as conclusively demonstrating the superiority of an Enclosed Harbour with one Eastern entrance, I might have let the question alone. But when we hear that "the principle of an enclosed Harbour has been objected to on nautical grounds," it believes me to explain that some nautical authorities think little of the principle of a detached Breakwater, but expect much benefit from an enclosed Harbour.

2. Speaking of a Breakwater, Mr. Dalrymple says "it is thus far a certainty — the roadstead inside of it cannot silt up." But of the enclosed Harbour he says, "it must be problematical".

3. I need hardly say that the Breakwater

~~Breakwater is the doubtful thing~~

many enclosed harbours are in exis-
-tence, but there is not one instance
of a straight Breakwater, lying off
and parallel to a straight sandy shore.
And I prefer the opinion of Mr. Robertson,
C.E. that "there may be as much, if
not more, danger from shoaling in the
case of a Breakwater as of an enclosed
Harbour".-

4. I append to this Memorandum
a transcript of the Admiralty Chart
of St. Mary's Island, East Coast of
Madagascar, as exhibiting a most re-
-markable natural Breakwater; behind
which, off the shore abreast, the sand
has for centuries been accumulating
into a point, which is by very slow
degrees approaching the island; and we
may reasonably conclude, that precisely
similar would be the operation of nature
behind any detached Breakwater in Madras
Roads.

5. I repudiate the notion that
on nautical grounds there is an insu-
-perable

insuperable objection to such a form
of harbour as Mr. Parkes proposes. If
any objecting seaman would particu-
examine his objections in the light
of Mr. Parkes' able and exhaustive Re-
-port, of November 4th 1873, he would,
I venture to think find many of such
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6. Precisely similar opposition
was made to the Wet-Dock scheme for
Table Bay, Cape of Good Hope. And,
even after the docks were finished,
it was the custom of some - even
nautical men - to predict disaster
to ships entering the harbour. But
when once a ship-Captain was found
bold enough to attempt an entrance
with a large ship under sail, the
ice was broken, and others followed
to their own advantage.

7. I have no hesitation in declar-
-ing my belief that practical seamen
would make no fuss about entering
or quitting Mr. Parkes' harbour; that
indeed it presents no inferiority on

that

that score to any form of Breakwater whatever. I think that any ideal advantages which a vessel may have in entering or quitting the shelter of a Breakwater, are dependent upon the contingency of an absence of any other vessels to impede the progress of the in-coming or departing ship. Now for such a ship Mr. Parkes provides a clear open area, more than two cables' lengths across, within the mouth of his harbour.—

8. I think that Mr. Parkes has conclusively demonstrated the superiority of his proposed Enclosed Harbour in every way:

Firstly:—in the greater area of real shelter afforded by his Harbour in comparison with that which a one-mile straight Breakwater can afford (see paras: 20 to 22).—

Secondly:—that the Breakwater will

will not (as suggested by Mr. Robertson) for an equal sum of money give much more deep water shelter than a harbour (see para: 22).—

9. Let us look a little at the statement of Mr. Robertson that "vessels can enter and quit more easily from behind a Breakwater than through the one entrance of a harbour."

10. Firstly:—As to rounding the Breakwater in the N.E. monsoon, November to March, ~~see plan~~, the wind is from the sea—say, from any point between N. by E. and E. by S—all that a sailing vessel can do is to anchor somewhere off the South end. Thence she must either be warped further in towards the centre, or betowed to a berth by a steam-tug. A steam-tug is preferable warping will much hinder boat-traffic.

11. It would never do to allow vessels

vessels to enter from the North whilst the current (as at that season) is running to South. At Calcutta, the in-coming Steamers are not allowed to come up above Garden Reach on a flowing tide; whilst out-ward-bound Steamers (or ships with tugs) must move out from amongst the shipping only on the flood stream.

12. With the same wind a sailing vessel can easily enter the enclosed Harbour, and drop anchor just inside. Then a warp will take her to her berth.

13. Secondly: With a land-wind, from between N.W. and S.W. how could a ship with a W. by N. or W. by S. wind (with current running to North, as between May and September) venture to run in behind the Breakwater from the South? How could she find room to round-to and anchor? She must then anchor to the North of the Breakwater, and be brought in by a Steam-tug.

14. With the Enclosed Harbour, ships arriving at the above time would anchor to leeward (either to North or to South), and wait for a tug to take them in.—

15. Thirdly:- With the normal "along shore" South winds, from mid February to April. The current then runs to the North, and vessels must not attempt to enter behind the Breakwater from the South, but they can only anchor to the North of it and be towed in to a berth.

16. The same tactics are necessary for ships arriving under the same conditions of weather at an Enclosed Harbour.

17. Fourthly:- at the commencement of a cyclone, when the wind is between North and N.W., vessels must anchor to leeward of the Breakwater and have a steam-tug to take them in

in. It would never do to allow them to run in from the Northward at such times and to thread their way amongst the shipping (see para: 11). And it is certain that there would not be the ghost of a bit of shelter for them near the North... part of a Breakwater.

18. Now, if the vessel seeking shelter could fetch to windward of Madras, she might bear up for the Enclosed Harbour on a South West course under easy sail, easily could make the entrance and, when within it, would put the helm down and let go the anchor about 250 yards to W. by N. of the North Pier Head. A vessel could even do this at night if red and green lights marked the two pier-heads, and if it were an understood rule that a clear space existed.

19 But, supposing that the vessel, in the above case, could scarcely fetch the entrance. Under the lee of the Enclosed harbour, the water would be smoother (for the operation of getting a hawser on board from a tug), than it could possibly be within the Breakwater when the wind is blowing fresh from the N by W. or the N. by E.

20. After the evidence which Mr. Parkes has collected as to the prevalence of Northerly winds at the cyclonic periods, we have good reason for doubting any realization of Sir Arthur Cotton's idea that "the Breakwater would leave the space behind it exposed to a ripple from Northerly or Southerly winds, but not to any swell". Every sailor, who has anchored for shelter to leeward of an island (and surveyors have more experience of this than others), knows that his vessel is not exempt from the swell that rolls in round both sides of the island, causing her to roll, whilst the operation of landing (even along the island's lee side) is not such an easy

easy thing after all. Anjidiva Island near Carwar, and St. George's Islands off Goa well illustrate this point. I could cite many other instances from my experience of the West Coast of India.

21. Mr. Parkes has well explained, in para: 21, that during the N.E. Monsoon, the sheltered part of the beach would only be near the light house, instead of opposite the business part of the town. Now, if the one-mile Breakwater be planted further Northward to obviate this great objection, there would be no shelter at the site of the present Custom House from the swell which rolls up from Southward during the prevalence of the S.W. Monsoon in the Bay of Bengal. And here I most heartily endorse Mr. Parke's remarks in para: 31, about "Preponderance of Northerly winds and direction of waves."

22. Now let me ask this question:- If the area, to be sheltered by the original one-mile Breakwater of Sir A. Cotton and Mr. Robertson, was not expected to suffer from any swell, why does Sir Arthur now speak of another form of harbour (noticed in para: 5 of the Memo: No. 75 signed by Colonel Walker, who states it as probably a nautical requirement), viz "two perpendicular jetties with ends that should not be joined but covered with a Breakwater parallel to the shore, leaving two openings, North and South, easy of access, and sheltered from the swell". This modification of the Breakwater scheme transforms it into an Enclosed Harbour. But the entrance of such a harbour as this cannot be easy of access and at the same time sheltered from the swell.

23. Nor would it be convenient to let a merchant ship rush into the harbour and take up whatever berth she likes. Her berth must be settled by the Port authorities, and it will be far more

Convenient

convenient that she should at first anchor outside and to leeward of the harbour, and from that position be taken in by a steam-tug.

24. Now we may say that the only question at issue is as to the best form for such an Enclosed Harbour. It is currently reported that Colombo is to have a Breakwater, and the inference is that what engineers have recommended for that place will suit Madras equally well. But the term Breakwater for Colombo is merely applied to the very same thing which Mr. Parkes has proposed for Madras, viz., two piers starting from distant points of the shore, not meeting, but leaving a space between them of about 150 yards for the entrance of ships. There is this difference, that Colombo has a bay, whilst the shore line of Madras is a straight sand, but the principle adopted for both places is identical.

25. Now I have to notice a Statement that it is "an imperative necessity to have the entrance protected by a Breakwater." A similar prediction (which events have completely falsified) was made in the case of the Docks at Table Bay, Cape of Good Hope. Some nautical men considered that, even through an opening of 300 feet, a considerable swell would sometimes roll in from the N. E. round the other long breakwater. But now the fact is established that each successive ocean-wave is completely broken against the vertical walls of the piers, and cannot become re-united to make head again and to roll into the harbour. The original waves are effectually dispersed; and in the case of Madras Harbour, the small derivative undulations, having to spread out over two right angles, will be speedily reduced to insignificance; as Mr. Parkes explains in paras: 60 and 61.-

26. ~~Our word more.~~ As to the Accommodation which Mr. Parkes' harbour will give us, I quite agree with all that gentleman says in paras: 22, 40 and 41 of his Report, Upwards of 30 ships could be well accommodated. And sailing ships during the fine season—waiting (as they now do) for many weeks before they can get a cargo—will find a pecuniary advantage in waiting outside in the Roads.

27. After a consideration of all conceivable contingencies, it seems to me that the single entrance according to Mr. Parkes' plan, is the best and it must also be the most economical. At any rate, the most question of Entrance need not delay the commencement of the two piers from the shore, whilst Sir Arthur Cotton and Colonel Walker agree with Mr. Parkes in the preliminary requisites of a closed harbour.

H. A. Taylor,

Commander, late Indian Navy—

P. W. 1874 Department
Pys: of Govt. for Navy
No 253.

From.

Captain A. D. Taylor,
Commander Late Indian
Navy.

Dated
Recd 15th } January 1874.

Encl: 1 Plan & Rep.

Submitting
his Memorandum
on the Harbours
for Madras.

No 175-178 F. 26 January 1874.

No 347
R. 24.

Copy of Paper

In letter No 1342 of 29th May 1872 the Govt. of India were requested to sanction the immediate construction of a Breakwater at Madras, from Long Stone at the Middle Stone by a Loan of 1½ Million Sterling.

Letter from Govt. of India No 358 B.C. of 9th Augt. called for report of measures in Madras Harbours proposed to provide for interest and repayment of the principal.

Reply No 2036 of 27th August stated Rs 6,84,732, or a little over 5 per cent on the proposed outlay, as likely to be available for the purpose; viz Rs 5,00,000 by a special additional duty of 1 per cent ad valorem on imports & by port dues on imports & exports estimated at 5 Millions Sterling, Rs 2,21,250, less Rs 36,578 the amount of dues appropriated, leaves Rs 1,84,732, by increase of Tonnage dues from the present ~~rate~~ of 3 annas to 5 annas & 8 annas for Steamers 12 ——— for Native Craft ——— for Ships —

Such special dues being in substitution of charges now in force in the Light dues of Boat-hire and Insurance; & not so leading any additional burthen to the Trade of the Port -

Copy of letter from the Chamber of Commerce, dated 6th July 1872, accompanied the above -

It was finally resolved that the Project should be treated as Imperial & not Local -

Letter from the Sort of Kidderpore No. 460 B.C. of 5th Nov. 1872 stated that the finding for construction of the inner Harbour must be raised locally either under Act XXIV of 1871, or by a Special Act constituting a Local Port Trust - It was further intimated to be desirable that the Revenue expected to be derived from the contemplated dues & the incidence of the dues to be levied on shipping should be carefully considered -

Note here, that no orders have been passed on this letter, which, after having been discussed in Council was remitted, & not returned till 16th August 1873 with the Madras Port Dues papers -

Meanwhile, Mr Parker was absent; and pending his return & report, matters have remained in abeyance -

Mr Despatch to the Sort. of Kidderpore No. 63 of 17th Jan/73 the Secty of State intimated that if the Chamber of Commerce & the General feeling of the mercantile Community there could be no hope of their provision for interest & repayment of principal without which it would be impossible that money could be provided for the project -

Copy of the above despatch was forwarded with Govt. Proceedings of the Sort. of Kidderpore No. 369 B.C. of 29th August 1873,

for expression of the opinion of the Madras Govt. with reference to the statements of the Chamber of Commerce that the bulk of the trade of Madras was likely to be done by Steamers, which are practically free from the risks to which sailing ships are subject in open roadsteads, so that there is no longer the necessity for so costly a work - Also that the chief advantage of Madras is its cheapness, and that the addl. charges proposed would tend to drive trade away -

The Chamber of Commerce have now, under date the 7th Nov. intimated that Mr. Parkes's scheme meets their views financially & can be carried out without too heavily hampering the trade with burthens - But they suggest that it may conveniently be enlarged, and that the Govt. should meet a portion of the cost in consideration of the considerable advantages it would derive -

Gnw.
11.11.73

IN

No. 475

Phd

13

Proceedings of the Madras Government.

Read the following

Commander
From ~~Captn~~ A. D. Taylor.
Commander, late I. N. } D. O. No. - of - Jany/74

Ordered that copies of this Memorandum be submitted for the information of the Secy of State and of the Govt of India; ~~and~~ Also ~~Ordered~~ that the thanks of the Government be conveyed to Commander A. D. Taylor for his valuable contribution towards settlement of the question of the best form of Harbour for Madras; placing before Govt. clearly as it does, ~~for the first time~~, the relative advantages in a nautical point of view of a Breakwater, and

~~In the~~ I w. send them with [illegible] to former [illegible] paper " especially to the ~~[illegible]~~ paper " transmitted with our letter " of the [illegible] from Mr. Dalrymple" (I mean Mr. Dalrymple's last paper)

Mr. [illegible] 9th Jany/74

? omit. Doesnt Mr Parkes do this already?

closed Harbour with single Eastern entrance so far as regards their accessibility of entrance at different seasons.

Copy of Mr. Dalrymple's further remarks on Mr. Partridge's scheme will be supplied to Commander Taylor for his information; and he will be requested to favor the Govt. with his views as to any additional protection he may think necessary for ships in Mr. Portland Harbour, and as to the best method of mooring them, having regard to the attainment of the utmost capacity consistent with safety.

14 Q.M.W.

Home Govt.
Govt. of India
4 Mr Portland Regulations Chrg from 46 pages ✓
Commdr A. D. Taylor ✓
Colonial Secretary Hobart Town
4 Insp. Genl. for Harbours ✓
Marine Superintendent ✓
Master Attendant Adm. ✓
2 Lt. Engrs. Pensioners ✓
Chamber of Commerce ✓

80

Desp. to Capt. A. D. Taylor 26/1/74 encls
Chrg from 4699 to Jan. 74.
P.C. desp. to all 12/2/74.

× Spare copies only desp. 25/2/74 to Lieut. Copy having been forwarded direct by the Secretary.

No 175 A

Copy of the above forwarded to the Government of India.

Despatch d.c 12/2/74.

To The Right Honorable the
Secretary of State for India.

My Lord Duke.

In continuation of our Despatch No 1 d/9 Jany 1874 we have the honor to forward herewith copy of a communication with which we have been favored by Commander A

A. D. Taylor late of the
Indian Navy on the best
form of harbour for Madras,
elicited by Mr. Parkes'
report on the subject. —

№ 253

Govt. of {1874} Madras.

PUBLIC WORKS.

To Mr Parkes
&
Fo Rle Secretary to the
Govt of India

Dated

Recd. Encl. /

G. O 26 Jany 1874. № 175-175A

Nos. 347 & 348 / 348A

Mas Harbour. Papers.

Forwarding Copy of Memo: by Commander A.D. Taylor, late of the Indian Navy, on the best form of Harbour for Madras.

Forwarding Copy of Memo: by Commander A.D. Taylor, late of the Indian Navy, on the best form of Harbour for Madras.

Forwarding Copy of Memo by Commander A. Taylor, late of the Indian Navy, on the best form of Harbour for Madras.