M. R. O. 1—82,400—29-11-50.

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.		Press Mis.
Dated		18

Not to be folded or roughly handled

Fort Saint George, Public Works Consultation of 13th July 1858.

No. 39. Read the following Extract from the Minutes of Consultation in the Marine Department, dated 16th June 1858, No. 230.

Read the following letter from Mr. S. PARKES, Civil Engineer; to the Chief Secretary to Government, Public Works Department, dated 15th May 1858.

SIR,

Motives of humanity have induced me to lay before the Government, a very simple plan for the alleviation of such calamities as your Roadstead has recently been visited with, according to public reports.

Although a stranger to Madras personally, I am not a stranger to its absolute maritime requirements and difficulties, together with the various attempts which have been made to relieve them.

The rough sketch plan, which I enclose, will exhibit the only form of Harbour that would be practicable in your position, both for Ingress and Egress, and likewise for shelter when inside.

If constructed wholly and solely of broken Trap stone exactly similar to what is used for macadamised Roads; it will endure for ever, and effectually resist the action of the wind and waves.

I would commence upon the Beach, at the point next the Town. Thus it will be self-extending, and can be performed by the most menial labour of the place.

Convict and criminal labour can also be made available; one good Overseer is all that is required upon the Pier Works, to see that the stones are thrown down into the required shape as per plan.

The main Breakwater would be $3\frac{3}{4}$ miles in length, and should not be less than 100 feet in breadth on its surface, and carried to about 10 feet above high water mark, and sloped downwards to an angle of about 35 degrees.

The contents of this Pier would be, say 19,800 feet long, 120 feet average width and 40 feet average depth, total 95,040,000 cubic feet, which at the rate which such broken Trap stones can be purchased and delivered in Bombay, namely $3\frac{3}{4}$ Rupees per 100 cubic feet, would amount to Rupees.....	35,64,000.
The contents of the smaller Pier, say $1\frac{1}{2}$ mile or 7920 feet long, 80 feet surface or 100 feet average width and 30 feet average depth—Total 23,760,000 cubic feet—Value Rupees.....	8,92,000.
Total Cost, Rupees	44,56,000.

Thus for the comparatively small sum of about $44\frac{1}{2}$ lakhs of Rupees, Madras could be provided with a magnificent Harbour of refuge, which would be large enough to contain the shipping for several generations and endure throughout all time.

Timber works will not stand, neither will Brick-work or Masonry work, which could not be constructed in such a Roadstead even if it would stand, and besides which it would be far more expensive.

The greatest possible amount of force which the most violent Hurricane could bring to bear against the outer Pier would be equal to $95\frac{3}{4}$ lbs. per superficial foot; thus the total or Hurricane pressure would be equal to a force of $11,137\frac{1}{2}$ Tons, and the weight of my proposed largest Pier would be about 17,183,581 Tons, thus giving a resistance equal to about one thousand five-hundred and forty-two and a half times, greater than the pressure.

The waves will not wash away a compact mass of such broken stones, if properly laid—but large, heavy burdens they will wash away, and frequently carry them great distances.

The experiment is a very simple and inexpensive one and could easily be tried, say by projecting a small portion of the large Pier in the direction shewn, for a few hundred yards from the Beach, and gradually extending it as prudence and experience may suggest.

Fort Saint George, Public Works Consultation of 13th July 1858.

Your late Chief Engineer Colonel A. Cotton will remember me ; and Doctor Lowe, recently appointed by His Lordship to the Sappers and Miners, is my Brother-in-Law. He is now near Calpee.

Owing to the general suspension of Public Works, I have recently left the Honorable Company's Service and expect to go to England by the 4th of June Mail, and will lay the proposals before the Honorable Court of Directors.

The Right Honorable the Governor in Council resolves to offer to Mr. S. Parkes, the thanks of the Madras Government, for his excellent Report on the form of Harbour which, in his view, is best adapted to the requirements of the Madras Roadstead.

2. Mr. Parkes, it is observed, was induced to submit his Plan to this Government, in consequence of his having been made acquainted with the results of the late disastrous gale of the 5th May at Madras, and it is his intention to lay his proposal before the Honorable the Court of Directors on his return to England.

3. Mr. Parkes is no doubt aware, that the plan of a Break-water at Madras, to afford complete protection to the Shipping, has been designed by Colonel A. Cotton. The plan, as explained in Colonel Cotton's Memo: of 3rd January 1857, was forwarded to the Honorable Court of Directors, but failed to obtain their approval.

4. The Right Honorable the Governor in Council resolves, however, again to solicit the attention of the Court to the subject. He is convinced that some such work as Mr. Parke's Harbour, or Colonel Cotton's Break-water is indispensably necessary, to render Madras a safe Port. Without it a Pier would be of comparatively subordinate importance. It would not, for example, have had any effect in preventing the Shipwrecks on the Storm of the 5th Ultimo. To give it its full value, it must be protected by Harbour Works or by a Break-water ; whilst under shelter of such Works, a Pier, if needed at all, might be of a much less costly character than that projected by Messrs Saunders and Mitchell.

5. The Government further resolve to forward copy of Mr. Parkes' letter and of its enclosure to the Marine Board, and, through the Department Public Works to the Chief Engineer, for their information.

(True Extract and Copy.)

(Signed) T. PYCROFT,
Chief Secretary.

No. 40. ORDER THEREON, No. 1318 ; dated 8th July 1858.

Ordered to be communicated to the Officiating Chief Engineer for information.

(Signed) T. PYCROFT,
Chief Secretary.

MARINE DEPARTMENT.

No. 230.

Extract from the Minutes of Consultation under date the 16th June 1858.

Read the following letter from Mr. S. PARKES, Civil Engineer ; to the Chief Secretary to Government, Public Works Department, dated 15th May 1858.

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5. The Government further resolve to forward copy of Mr. Parkes' letter and of its enclosure to the Marine Board, and, through the Department Public Works, to the Chief Engineer, for their information.

(True Extract and Copy.)

Chief Secretary.

To Mr. S. Parkes, Rectory Grove, Clapham, London.
To the President and Members of the Marine Board.
„ Department Public Works.

Exd. J. A. Wilson.

P. Works 1858 Departt
Dy. to Govt. 16th July
No. 1408

Exd = Mins = Corresp in the
Marine Departt:

Dated 16th
Recvd 25th } July/58

No. 230.

Offering thanks to
Mr. S. Peppes for his excellent Report
on the form of Harbour
which in his view is best
adapted to the requirements of the Madras
Road Stead & resolving
to forward copies of his
Report to the Hon. Court
and the Chief Engr.

No. 1318. 8th July 1858.
Minute or Order

No. 1318

Ordered to be communicated to the Public Engineer for information -

W. H. D

Fort St. George
8th July 1858

A Copy to the Offg. Chief Engr. Con. P. G

No. 39 & 40.