M.R.O. 1—77,006—8-6-37.

(1) Number of pages_____

(2) Date of repair_____

(3) Initials of the Referencer_____

MADRAS RECORD OFFICE.

Government of Madras.

Public works **DEPARTMENT.**

G.O. No.		Press / Mis.
317, 318, 319, 320, 321	2945	
Dated	16-12-	1892.

Not to be folded or roughly handled

K.M.S

Proceedings of the Madras Government, Public Works Department, 16th December 1872.

Read the following papers :—

No. 317. Proceedings of the Madras Government in the Marine Department.

(Here enter No. 156, dated 1st July 1872.)

No. 318. From the Members of the Pier Committee, to the Secretary to Government, Public Works Department, dated Madras, 6th September 1872.

With reference to the Order of Government, dated the 12th June 1872, No. 1,457, we have the honour to report that of the Rupees 5,000 placed at our disposal for the purpose of making experiments to decide the possibility of restoring the Pier along the line originally occupied by it, we have spent Rupees 1,242-7-6, and we have arrived at the conclusion that no great difficulty will be experienced in screwing piles along the whole of the gap. The abovementioned outlay has not only covered the cost of making experimental borings along the line of the gap, but the gap itself has been materially shortened, one row, consisting of four piles, having been placed in position at the west or inner end.

2. With the assistance of the General Superintendent of Public Works Stores, plans and estimates have been prepared for executing the work sketched out in our letter of the 10th June, and these we have now the honour to submit.

3. It will be seen that the estimates are in three parts: first, for closing the present gap, amounting to Rupees 1,33,374; second, for the protective works recommended by us, amounting to Rupees 30,940; and third, for strengthening the Pier head, amounting to Rupees 39,110. The total amount of the estimates comes to Rupees 2,03,424.

4. Of this large sum it will be observed that the cost of materials, including carriage, is Rupees 1,08,493; that the estimated cost of labour is Rupees 54,246; and that no less a sum than Rupees 40,685 has been allowed for contingencies. The mode in which the last two items have been calculated is simple. The cost of labour is taken at 50 per cent. upon the value of the materials, and a sum equal to 25 per cent. upon the cost of materials and labour taken together is allowed for contingencies. Mr. Grainger, by whom these estimates were originally prepared, was unwilling to reduce these amounts; and as the services of that gentleman were specially placed at our disposal for the preparation of the estimates, we have not felt ourselves at liberty to alter his calculations, the more so as they are founded upon the experience gained by him when the Pier was restored three years ago. At the same time we are bound to state that, in our opinion, the estimated amounts for labour and contingencies, which together come to no less than Rupees 94,931, are excessive. While fully recognizing the great difficulty of framing any accurate estimate of the cost of work of this nature, we are of opinion that it ought to be carried out in six months, and we cannot bring ourselves to believe that the entire cost for labour, etc., ought to exceed Rupees 5,000 per mensem. The estimate for these items would thus be reduced to Rupees 30,000, being less than one-third of the sum entered in Mr. Grainger's estimates.

5. With regard to the estimated cost of the materials, which comes to no less than Rupees 1,08,493, we beg to remind the Government that the articles noted in the margin have been already procured from England for the repair of the Pier, and are now lying stored on the beach in Abercrombie's Battery. The value of these articles, as entered in the estimate, amounts to Rupees 44,292; so that the actual cost to be now paid for the materials required for restoring and protecting the Pier may be reduced from Rupees 1,08,493 to Rupees 66,201.

	Rs.	A.	P.
18 Piles 8″ diameter	16,456	8	0
38 Do. 6″ do.	19,009	8	0
18 Caps for 8″ piles	569	4	0
17 Do. for 6″ do.	443	5	10
56 Screws for do.	2,677	10	0
18 Round diagonal braces ...	1,327	0	8
10 T do. do. ...	3,565	0	0
40 Standards for handrails ...	90	5	9
Chains for do. ...	154	0	3
Total...	44,292	10	7

6. We beg to express our regret at the delay which has occurred in the submission of these estimates. The Government are aware that every member of the Committee has special duties which occupy almost all his time, and since the formation of the Committee our duties have obliged us to be absent from Madras on several occasions. Immediately after the estimates were first prepared, Mr. Grainger was obliged by ill-health to leave Madras, and the revision of the estimates was kindly undertaken by Colonel Goddard, who is performing Mr. Grainger's duties during his absence. To both of these gentlemen we beg to express our best thanks for the assistance we have received from them.

FORWARDED to the Superintending Engineer, 4th Division, with reference to his letter, No. 3,067, of 19th October.

To be returned without delay, accompanied by Mr. Grainger's revised estimate, already called for. Printed copy will hereafter be supplied.

(Signed) G. W. WALKER, Colonel, R.E.,
25th October 1872. *Secretary to Government, P.W.D.*

No. 318. From the Master Attendant, Administrative Department, to the Chief Secretary to Government, Marine Department, Fort St. George, dated 9th September 1872, No. 4,967.

WITH reference to the Report of the Pier Committee sent in to Government on the 6th instant, I have the honour to make a proposal which I trust will be approved of by His Excellency the Governor in Council.

2. I beg leave respectfully to remind Government that in 1867-68, unassisted by any other department, Mr. Sadler, the Pier Master, who is a first-rate mechanic and ship builder, under my orders—expending the materials as per margin—restored three parts of the beams and planking of the Pier for Rs. 59,868-10-11. He now undertakes to close the gap for Rupees 30,000,* and I hereby guarantee that he will accomplish the work under that sum.

	Rs.	A.	P.
381 Logs, Teak timber ...	25,891	7	4
43,941 Feet, Mangoe plank ...	10,733	13	4
Iron, Coal tar, etc.	5,746	2	5
Workmen	17,497	3	10
Total ..	59,868	10	11

* *Note.*—The piles, bracings, etc., etc., are already paid for.

3. It must be distinctly understood that this outlay of Rupees 30,000 will cover all expenses, namely, beams, planking, extra labour, etc., etc.; the piles, bracings, etc., now in store to be delivered by Mr. Harris of the Department of Public Works, when required, at the inner end of the Pier.

4. I would further request that the general supervision of the work be entrusted to Colonel Goddard, R.E., and myself.

5. We have now one tier of 4 piles down and beam laid; spars, staging, etc., prepared, and we are ready to go on with the work at a few hours' notice.

6. As a great saving to Government will thus be effected, I earnestly hope that sanction may, without loss of time, be accorded to this proposal.

7. I have another scheme for permanently protecting the Pier in the line of surf where it is most liable to injury, and which I shall shortly lay before Government.

No. 319. From the Vice-Chairman, Chamber of Commerce, to the Chief Secretary to Government, Ootacamund, dated Madras, 7th October 1872.

I AM desired to solicit the attention of the Government to the circumstance that though five months have elapsed since the Madras Pier was rendered useless during the cyclone, and though it is reported that ample material for its repair is in store and immediately available, no visible progress has been yet made in the work requisite for restoring the structure to an efficient condition. It will not have escaped the recollection of Government that the accident to the Pier in June 1868 was not fully repaired, and traffic resumed until November 1869, during which period the Government were compelled to maintain the Pier Establishment on a reduced yet costly footing, and the public were obliged to fall back upon the old means of communication with the shipping. The Chamber have ascertained from the Madras Administration Report that the tolls levied on the Pier from the 1st April 1870 to the 31st March 1871 amounted to Rupees 18,932, or at the rate of Rupees 1,577 per mensem. The charge for establishment is not stated, but, assuming it to have been, in accordance with the Order of Government of the 14th November 1870, No. 322, less than Rupees 1,000 per mensem—a charge which the Government concurred with the Chamber in regarding as too high—it would seem that the Pier realised a very fair surplus in the official year under notice. But situated as it now is, not only is that surplus lost, but an expenditure of probably Rupees 595 a month (the cost of the establishment when the structure was under repair in 1868-69) is entailed upon the Government, who thus virtually lose about Rupees 1,200 per mensem while the Pier is closed to traffic. Thus, not only does the public at large, and more especially the commercial section of it, suffer grave inconvenience from the tardy restoration of the Pier, but the Government must be prepared for a considerable addition to the cost of the repairs that may be fairly said to be avoidable. It seems, therefore, to the Chamber desirable to suggest, for the consideration of His Excellency the Governor in Council, that if the Department of Public Works, owing to the pressure of other calls on them, cannot speedily undertake the repairs, there would be no difficulty in finding a competent professional person to contract for the completion of the work under the requisite supervision, within a comparatively short period. Owing to the prevailing dullness of trade, the deprival of the accommodation afforded by the Pier in shipping

operations has not been felt so severely as would have been the case in a more active time; but it is obvious that if the Pier is to be restored at all, the work should, in the interests alike of the Government and the public, be commenced in earnest, and carried on to completion with as little delay as possible.

REFERRED to the Department of Public Works with a request that the preparation of estimates may be expedited as much as possible with a view to the speedy repair of the Pier.

OOTACAMUND, *19th October* 1872.

(Signed) R. S. ELLIS,
Chief Secretary.

No. 320. From the Superintending Engineer, 4th Division, to the Chief Engineer, Public Works Department, dated Madras, 7th November 1872, No. 3,442.

1 Mr. Grainger's Report.
1 Committee Report.
3 Bills.

IN reply to your No. 137 of 5th October 1872, I have the honour to enclose Mr. Grainger's explanation regarding the cost of work in restoring the Pier. It will be seen that at the time the Committee sent in their report (herewith returned) they did not know the amount due by them to the workshop, which was really Rupees 2,667-6-6.

2. They had also omitted the cost of labour employed. It is true that the people were paid members of the establishment, but if their salaries are not to be charged to the experiment, they may be deducted from the estimate if they are able to complete the larger work.

3. Including their salaries and cost of piles, the putting down of four piles has cost really ... ... Rupees 6,631 10 0
or per pile ... ... ,, 1,657 14 6
against Mr. Grainger's estimated charge of ,, 1,326 1 6

But further, the Pier Committee have not driven their piles to the full depth, and have worked in open ground, whereas in the breach they are likely to meet with debris of Pier, broken piles, and their screws; and I fear that Mr. Grainger's estimate is likely to be rather under than over the mark.

4. I would take this opportunity of suggesting that we should run far less risk of such excess if instead of restoring the Pier we were to put down groups of piles in tolerably clear ground at the ends of the gap for abutments, and one or two piers in the opening on which to lay a girder bridge of two or three spans, which might be made movable, though I am not clear that there would be much advantage in that.

From the General Superintendent, Public Works Stores and Workshops, to the Superintending Engineer, 4th Division, dated Chepauk, 4th November 1872, No. 1,599.

1 Pier Committee Report.
1 Estimate.
1 Letter from Master Attendant, with Memorandum of Charges.
1 Statement.

IN reply to your No. 3,000 of 10th October 1872, forwarding for early report Memorandum No. 137, from the Chief Engineer, Department Public Works, requesting information relative to so heavy a cash outlay as Rupees 1,09,447 on the restoration of the Madras Pier in 1868-69 and 1869-70, I have the honour to enclose a statement of expenditure (extract from the monthly

Progress Report) showing the distribution of the above amount of Rupees 1,09,447. The estimate for the repair of the Pier in 1869, sanctioned and recorded in Government Order, 6th February 1869, No. 384, though signed by Mr. Black, the Engineer sent from England to repair the Pier, was prepared by me, and the items labour (or cost of erection including tools, etc.,) and contingencies were calculated in a similar manner as in the estimate now under consideration, viz., 50 per cent. for labour and 25 per cent. contingencies, the approximate correctness of which was shown by the subsequent carrying out of the work as per enclosed statement to be rather less than the amount necessary, for Rupees 1,76,000 had been expended on the restoration of the south side, leaving only Rupees 1,10,000 for the north side.

2. There were no special causes necessitating heavy cash outlay other than those incidental to work of this nature, viz., the expensiveness of the materials employed, for of the amount, 1,09,447 Rupees, 76,718 Rupees was paid to the Public Works Workshops for the supply of teak timber, beams, planking, caps for piles, tools, etc., leaving Rupees 32,729 as the expenditure on labour on the work (in the carrying out of which it was often necessary to take up and re-screw piles in different places on account of obstruction met with when the piles were within a few feet of their proper depth.)

3. In the preparation of the former estimate, the word labour was intended to include the cost of erection and tools, not pure labour only, and with that meaning it was used in the present estimate. In the abstract of enclosed statement Rupees 61,931-5-5 is the expenditure under the head labour and Rupees 1,14,832-15-2 under the head materials, so that the cost of erection is 54 per cent. of the cost of the materials.

4. Considering the original cost of the Pier, that in its construction the caps were not fixed to the heads of the piles, and that Battee timber was used for beams, the cost of restoring the south side in 1868-69 will compare very favourably, for then the caps were securely fastened to the heads of the piles and wrought iron girders and teak timber beams were employed.

5. The total cost of the Pier as per contract was Rupees 10,79,486 which included fourteen cranes and several turn tables, the cost of which could not exceed Rupees 20,000, and as the work was similar throughout and contained 468 piles, we get Rupees 2,264 as the average cost per pile including superstructure of 100 square feet, and in the repairs of 1869-70 the expenditure was Rupees 1,76,764 and sixty-three new piles were screwed in, we get Rupees 2,794 as the average cost per pile, including superstructure of 135 square feet or 25·5 per cent. in excess of the original rates for constructing the Pier.

6. In reply to paragraph 2 of the Chief Engineer's Memorandum, I respectfully beg to state that it is not possible to make any deduction whatever in the present estimate, and if it is considered safe to frame an estimate on the data obtained from the placing in position of the one row of piles alluded to by the Pier Committee in their report, it will be necessary to increase the present estimate as shown in the next paragraph.

7. The Pier Committee in their report, paragraph 1, state that only Rupees 1,242-7-6 had been expended, and that this had "not only covered the cost of making experimental borings along the line of the gap", but that "one row consisting of four piles" had been "placed in position." Such boring consisted in the putting down of a two-inch auger at the intended site of each pile; if the auger went down without resistance, it was considered that a pile with a face [illegible] feet diameter would do the same. These borings were made by the Pier Master under Mr. Dalrymple's instructions, but were not considered sufficiently reliable by me to be taken into account in the preparation of the present estimate. This amount was increased to Rupees 1,616-10-6 in the Master Attendant's letter, No. 6,116, of 30th October 1872, but as this amount did not include the cost of the piles, or the pay of Mr. Harris, the Foreman, and the Pier Master and his establishment who were employed on the work, and should have been charged on the

work as in 1869-70, the actual expenses incurred in the placing in position of the four piles is—

	Rs.	A.	P.
To cost of two 8" piles weighing Tons 3-19-2 each, at Rupees 230 per ton ...	1,828	8	0
,, ,, 6" ,, ,, 2-3-2 ,, at ,, 230 ,, ...	1,000	8	0
To amount due to Public Works Workshops	1,050	12	0
To per Master Attendant's letter No. 6,116	1,616	10	6
To pay of Pier Master and his Establishment from 15th July to 19th August 1872	785	3	6
To Mr. Harris' pay	350	0	0
Actual cost of the row now in position	6,631	10	0
Estimated cost of same as per my estimate being 87½ per cent. on Rupees 2,829, the cost of the four piles	5,304	6	0
Difference...	1,327	4	0

Being about 25 per cent. in excess of the present estimated rates. I may here remark that this row of piles has not been screwed down to its proper depth, and their position also is in clear ground.

8. The present estimated amount for closing the gap is Rupees 1,33,374, and as only thirty-five piles are to be employed, this will give an average rate of Rupees (3,810) three thousand eight hundred and ten per pile with superstructure of about 200 square feet. This rate is higher than those given in paragraph 5 of this letter, but it is owing to one pile having to support double the superstructure of one pile in the original Pier, and the employment of horizontal bracings at the water line which were not included in the former rates.

9. In paragraph 5 of the Pier Committee's report it is stated that material to the value of Rupees 44,292, being stored at the beach will not therefore have to be paid for by cash allotment; but as these stores are Imperial stores and the Pier a Local Fund work, it is ruled under Government Order, No. 2,394, dated 4th October 1870, that all such issues must be paid for in cash or its equivalent book transaction, and must therefore be met from the funds allotted to the work; therefore the whole of the material required for the work must be paid for.

10. In conclusion, I beg to re-submit the estimate.

No. 321. ORDER THEREON, 16th December 1872, No. 2,975.

CIVIL WORKS, No. 16.

THE Committee appointed by G. O., No. 1,219, of 13th May, to report on the best means of restoring the Madras Pier and ensuring its future safety, have, under date the 6th September, submitted the three undermentioned estimates prepared by the Public Works Department of the probable cost of effecting the object in view according to designs accompanying their report, namely:—

1.—For closing the present gap—

	Rs.	A.	P.
Piles and other materials already available, (namely, braces, bolts, and nails)	32,744	14	7
Other iron materials	21,410	13	11
Timber superstructure...	16,647	0	9
Cart-hire	330	0	0
Cost of erection...	35,566	6	8
Contingencies	26,674	13	0
	1,33,374	0	11
Deduct available materials...	32,744	13	7
Net money outlay ..	1,00,629	3	4

Proceedings of the Madras Government, Public Works Department,
16th December 1872.

2.—For future protection of the work—

	Rs.	A.	P.
Piles and screws available...	11,546	11	6
Other materials	4,893	4	10
Cart-hire	61	5	8
Cost of erection	8,250	11	0
Contingencies	6,188	0	3
	30,940	1	3
Deduct available materials ..	11,546	11	6
Net money outlay...	19,393	5	9

3.—Strengthening the Pier head—

	Rs.	A.	P.
Materials	20,788	13	2
Cart-hire	70	0	0
Cost of erection	10,429	6	7
Contingencies	7,822	1	0
Net outlay proposed...	39,110	4	9

2. The Committee's proposal is to restore the Pier in its original line, and to its original width; and the space to be worked over will be, in round numbers, 180 feet in length by 40 in breadth. In the restoration, nine rows of four piles each will be used minus one inner pile already standing, making thirty-five piles in all, at an average distance of 20 feet from row to row, or double the distance apart in the original structure.

3. The Committee were not prepared to alter the amounts of the estimates which they forwarded, but could not bring themselves to the belief that more than one-third of the sums entered in them for cost of erection and contingencies need necessarily be incurred, and stated that they had actually driven one of the nine rows of piles at a cost of Rupees 1,242-7-6, a sum which is increased by the Master Attendant to Rupees 1,616-10-6, and by the Workshop Superintendent to Rupees 2,667-6-6, excluding the pay of the Pier Establishment. The entire cost of the original work was at the rate of Rupees 2,264 per pile, complete. That of the repairs carried out in 1868-69 and 1869-70 at the rate of Rupees 2,794 per pile, complete. That involved by the amount of estimate No. 1 would be Rupees 3,810.

4. Making every allowance for the difficulty of working over the original line of Pier, His Excellency the Governor in Council cannot but think that the rate which obtained in 1868-70 may with safety be adhered to, and the total cost of restoration of the Pier set down at 35 × 2,800 = Rupees 98,400, out of which deducting Rupees 71,132-13-3 for materials and carriage, Rupees 27,267-2-9 would represent the probable cost of labour and contingencies. It will be considered in the Financial Department how provision shall be made for such a sum less Rupees 32,744-13-7 available for materials in hand.

5. Nos. 2 and 3 will be amended by adoption of a rate of 30 per cent. for labour and contingencies on the former, and half that percentage for the latter, which involves no screwing operations, reducing the amount of the former to Rupees 21,450, of which less than Rupees 10,000 will be cash outlay, and of the latter to Rupees 24,000 in round numbers. But their execution will be deferred

till after the restoration of the Pier shall have been successfully completed. It will be carried out by the Presidency District Engineer; all his own resources and those of the Marine Department being made available to co-operate in the work, and bring it as speedily and economically as possible to a conclusion.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,

Secretary to Government.

Read the following papers:—

No. 29. From the Master Attendant, Madras, to the Chief Secretary to Government, Fort St. George, dated Madras, 14th April 1871, No. 2293.

Administrative Department.

In acknowledging receipt of Order of Government, dated 2nd March 1871, No. 62, I have the honour to state that few of the frauds and acts of oppression practised by the Shipping Dubashes and Conicopolies have come under my personal observation at the time they occurred.

2. The facts of such frauds, &c., having occurred are, however, notorious, and I herewith submit, for the information of Government, a list* of debts, which have since come to my notice and which are still due to boat-owners† by Dubashes and Conicopolies. The original statements, verified by the signatures of the boat-owners, are principally in Tamil, and I retain them in my office for reference when required.

3. I have to explain that even the reduced amount of boat hire is never paid to the boat-owners by the Conicopolies in ready money, but is held back for months, and, in the meantime, the boat-owners must, to a certain extent, pay their crews with borrowed money, to their great loss and often utter ruin.

4. The only means of redressing these grievances is, in my opinion, the re-establishment of a Boat Pay Office, a large proportion of the most influential members of the mercantile community and a majority of the boat-owners being in favour of it.

* *Vide* paper marked A.

† List of Creditors.

L. Samuel	Boat-owner.
T. Valoyuda Moodelly	do.
Aurckeyasawmy Moodelly	do.
Ramasawmy Moodelly	do
M. Annappah Moodelly	do.
Narrainsawmy Chetty	do.
M Mooneesawmy Naick	do
Vencadasa Chetty	do.
Ramasawmy Chetty	do.
V. Soondera Moodelly	do.
Soobooroya Naick	do.
Mackoya Chetty	do.
Souremoothoo Moodelly	do.
Rasappah Moodelly	do.
Verappah Chetty	do.
Vullathan Chetty	do.
P. Vencannah Naidoo	do.
Vagappah Naick	do.
Canacummall	do.
Eresuppah Chetty	do.
Mackoya Chetty	do.
Ramasawmy Moodelly	do.
Chinna Moothoo Moodelly	do.
Ponnoosawmy Chetty	do.
Ramdoss Moodelly	do.

Names of Dubashes and Conicopolies who have taken the benefit of the Insolvent Act, (*vide* paper marked B.)

Ragavooloo Naidoo, or Thumboo Naidoo.
Coopoosawmy.
Rungiah Naidoo.
Mannaroo Moodelly.

In the same paper (marked B), list of persons who have decamped with boat hire due to the Boat-owners.

Mooroogasa Moodelly.
Eresappen.
N. Veerasawmy.
Mooneesawmy Moodelly.
Poonoosawmy Chetty.
Soobooramaneya Moodelly.
Maneca Moodelly.
Valoo Moodelly.
Cotlingum Moodelly.
Vencatakistnan.
Subapathy Moodelly.

Two papers signed R. Ross, marked C. D.

No. 30. From the Pier Tolls Revision Committee, to the Chief Secretary to Government, Fort St. George, dated Madras, 20th April 1871.

In accordance with the request contained in the Proceedings of Government, Marine Department, under date the 17th February last, we, the undersigned, have met and considered the working of the Schedule of Pier Tolls now in force and its effect upon the revenues of the Pier, and have the honour to submit the following report for the consideration of Government.

2. We are of opinion that, with one exception, the tolls at present in force are not exorbitant or prohibitory. The exception to which we allude is the toll on "any article of half a ton or upwards, Rupees 2-8-0 per ton." We would, however,

suggest the insertion of a charge of Rupees 2 on every two-wheeled carriage, horse, or pony, shipped from, or landed at, the Pier, in lieu of the present charge for a two-wheeled, or pony, carriage.

3. In some instances, and notably in the case of the large pipes lately imported by the contractor for the Madras Water Works Piping, we have reason to think that the toll of Rupees 2-8-0 per ton on any article of half a ton or upwards has tended to drive importers to land their goods on the Beach instead of at the Pier, and we, therefore, recommend that while "machinery" in pieces of half a ton or upwards "should continue to pay a toll of 2½ Rupees per ton," other articles of half a ton or upwards, and not specifically mentioned elsewhere in the Schedule, should pay at the rate of 8 Annas per ton only.

4. During the years 1868-69 and 1869-70 the Pier was damaged and under repair, and the receipts from it in consequence were small; but a comparison between the receipts during the years 1866-67, 1867-68, and 1870-71 (the last a year of great depression in trade), and the value of the imports and exports during those years, shows that during the last of them the ratio was higher than during either of the two former ones, as exhibited in the marginal statement, from which we may conclude that the tendency to use the Pier is not on the decrease.

Years.	Total value of imports and exports, excluding treasure.	Pier collections	Ratio.
	Rs.	Rs. A. P.	
1866-67... ...	3,92,79,972	12,928 6 8	1 to 3,038
1867-68... ...	4,95,15,855	11,225 12 5	1 to 4,411
1870-71... ...	5,36,24,872	17,760 10 9	1 to 3,019

5. That the Pier is not as much used as it might be is, we fear, beyond doubt, by far the greater portion of imports being landed on the Beach, and we are satisfied that the reason why this should be so is neither far to seek nor difficult to remedy.

6. As long as there are two methods of landing and shipping goods, and as long as the use of either is optional, so long is it certain that that method will be preferred which is cheapest and which affords the greatest facilities for making profits on the part of the contractors and others who land and ship the goods.

7. The Government are aware that a regular charge for boat hire is in existence under their sanction. 2 Rupees is the hire for a trip from the Pier to a vessel and *vice versâ*, and 2½ Rupees from the Beach to a ship or from a ship to the Beach. It was considered that by charging an additional 8 Annas per trip to the Beach the cost of landing a boat-load of cargo by means of the Pier (for which the Pier charge is 8 Annas) and that of landing it on the Beach would be equalized, and that importers and exporters would then, by preference, use the Pier. The result has not, however, come up to the expectations that were formed, and, in our opinion, for this reason: the business of exporting goods from, and importing them into, the Port of Madras is virtually in the hands of a class of middlemen called "Ships' Dubashes," who act independently of the Mercantile community and Houses of Agency; but who are, for the most part, men of straw, who make their own arrangements with the Captains of ships to land or ship their cargo for them, and, having made these contracts, they then contract with the owners of boats to land or ship the goods at a much lower rate per trip than that sanctioned by Government, and almost invariably prefer to land or ship from the Beach because they have then another opening for profit in the item of cooly hire for carrying the goods to or from the Custom House, for which they charge higher in their bills than they actually pay.

8. In illustration of the above we may state that we are in a position to know that for the last few days the Dubashes have been landing cargo on the Beach at the rate of Rupees 1-13-0 per trip, while Mr. Woolley, the Pipes Contractor, has a contract with a Dubash, under the terms of which his pipes, large and small, have been landed on the Beach and rolled up to the road for Rupees 1-8-0 per ton. Had they been landed at the Pier, the toll on the large ones alone would have cost him Rupees 2-8-0 per ton.

9. The expedient which we would suggest with a view to inducing a more general use of the Pier is the establishment of a Boat Pay Office, where all boats, boat-owners, and crews should be registered as at present, and without a pass from which office no boat should be allowed to ply for hire. The existing rates of boat hire might be maintained; all payments on that account would be made at the Pay Office, and, on any payment being made, a pass for a particular boat would be given, and would be the boat's authority for one or more trips. In this way, the number of boats plying for hire daily would be known, and all payments made would be distributed daily or weekly to the boat-owners, who would thus be sure of receiving their earnings, of which, under the present system, they are sometimes defrauded or deprived by the absconding or bankruptcy of their Dubash debtors.

10. Another cause which tends somewhat to make merchants shun the use of the Pier is the uncertainty existing as to the amount of responsibility which attaches to the Pier establishment or to the boatmen employed by the merchants, respectively, in the event of goods being damaged or lost during the act of landing them at the Pier. The limits of this responsibility should be more clearly defined than they are at present, and the necessity for this will be greater in proportion as the traffic on the Pier increases.

11. We do not feel called upon in this report to make any suggestions regarding the Pier establishment; but we think we may remark that we have been informed by the Master Attendant that the existing permanent establishment is sufficient to supervise the Pier even if a traffic of 700 tons a day were to pass over it, so that, in the event of the Pier being much more used than at present, there would probably be no need for any increase of establishment until the above limit of traffic was reached.

12. We regret the delay that has occurred in submitting this report, but it was unavoidable, the prolonged absence of the Master Attendant on a tour of duty in the first instance, and the subsequent departure of the Superintending Engineer to give evidence in the Sessions Court at Palamcottah, having prevented the Committee meeting sooner than it did.

13. The Schedule of existing Pier tolls, with the alterations proposed by us noted in red ink, is herewith forwarded.

(Signed) C. V. WILKIESON, Colonel, R. E.
(,,) H. D. E. DALRYMPLE.
(,,) P. MACFADYEN.
(,,) J. H. GARSTIN.

No. 31. ORDER THEREON, 30th May 1871, No. 153.

In the second of the letters above recorded the Committee appointed under date the 17th February last submit their report on the working of the Schedule of Pier Tolls.

2. The Committee are of opinion that, with one exception, the tolls in force are not exorbitant or prohibitory. The exception is the toll of Rupees 2-8-0 per ton on "any article of half a ton or upwards."

3. The Committee recommend that while "machinery in pieces of half a ton or upwards" should continue to pay a toll of 2½ Rupees per ton, "other articles of half a ton or upwards, and not specifically mentioned elsewhere in the Schedule, should pay at the rate of 8 Annas per ton." The Committee also suggest a charge of Rupees 2 on every two-wheeled carriage and on every horse or pony shipped from, or landed at, the Pier, and that the distinctive rate for a pony-carriage be abolished.

4. In paragraphs 4 to 10 the Committee remark upon the Pier collections, the causes which prevent the more general use of the Pier, and the establishment of a Boat Office.

5. The Government, after full consideration of what has been urged by the Committee and the Master Attendant, Madras, in his letters dated 6th February last, No. 858, and 14th April 1871, No. 2293, resolve to sanction the re-establishment, under the supervision of the Master Attendant, of a Boat Pay Office, on the condition that it shall be self-supporting.

6. The Government also approve and sanction the alterations proposed by the Committee in the Schedule of Pier Tolls, and direct that the Notification at foot be published in the next *Fort St. George Gazette.*

7. The Master Attendant will submit, for the approval of Government, a tabular statement of the establishment, and draft of the Rules which he would propose for the efficient working of the Boat Pay Office.

8. The Master Attendant will also state his opinion on paragraph 10 of the Committee's report as to the degree of responsibility which should attach to the Pier establishment and to the boatmen employed by merchants, in the event of goods being damaged or lost while landing them at the Pier.

9. The Government avail themselves of this occasion to thank the Committee for the attention which they have bestowed upon the questions brought under their consideration and for the suggestions contained in their report.

NOTIFICATION.

Fort St. George, 30*th May* 1871.

The following tolls will be levied, under the provisions of Section 2 of Act V. of 1863, on goods and passengers passing over the Madras Pier on and after the 6th June 1871:—

Ordinary Weights.	RS.	A.	P.
On every Cargo Boat of export or import goods or baggage	0	8	0

Heavy Weights.	RS.	A.	P.
Steam Boiler	15	0	0
Machinery in pieces of half a ton or upwards ... ... per ton	2	8	0
Other articles of half a ton or upwards, and not specified below, ,,...	0	8	0
Four-wheeled Carriage	3	8	0
Two- do. do.	2	0	0
Horse or Pony	2	0	0
Pianoforte	3	8	0
Dogs, Sheep, and other small Animals, each	0	1	0
Passengers.			
Each Passenger landing or embarking, including personal baggage taken in Boat with him	0	2	0
Ships' Market Boats taking provisions at the Pier	0	4	0

All goods landed, which are subject to duty, will be discharged into the Custom House.

All goods landed, which are free from duty, will be discharged at the inner end of the Pier, from whence parties must make arrangements for their further removal.

(By order of His Excellency the Governor in Council.)

W. HUDLESTON,
Acting Chief Secretary.

To the Master Attendant, Madras.
,, Hon. P. Macfadyen, Chairman of the Chamber of Commerce.
To J. H. Garstin, Esq.
,, Colonel C. V. Wilkieson, R. E.
To the Accountant-General.

Exd. A. S. Rodgers.

Proceedings of the Madras Government, Marine Department, 6th July 1871.

Read the following papers :—

No. 3. From the Master Attendant, Madras, to the Acting Chief Secretary to Government, Fort St. George, dated Madras, 6th June 1871, No. 3321.

Administrative Department.

I have the honour to acknowledge receipt of Proceedings of Government, dated 30th May 1871,* and, in obedience to the orders therein, to forward a tabular statement of the establishment required for the Boat Pay Office, and draft of Rules which I consider necessary, and which are much the same as those proposed by Captain Crowther,† for the efficient working of the office.

* No. 153.

† In letter dated 3rd June 1870, No. 2740.

2. With reference to paragraph 10 of the Order of Government aforesaid, it is my opinion that, in clearing a boat alongside the Pier, the responsibility of the boatmen ceases when an article of cargo is *properly slung and clear of the boat's gunnel*; but if it be not properly slung, and drops out of the slings, the responsibility rests with the boatmen.

3. In shipping cargo from the Pier, all responsibility rests with the Pier establishment until the cargo is lodged in the boat, *i.e.*, if the boatmen guide the cargo into the boat and unsling immediately.

Proposed Establishment for Boat Office.

	Per mensem. Rs.
One Superintendent	300
,, Head Clerk	70
,, Cashkeeper and Accountant...	35
Two Conicopolies, at Rupees 15 each	30
,, Peons, at ,, 7 ,, ...	14
Total...	449

Rules for the Boat Office.

1. Owners of boats, or their duly constituted Agents, shall be in attendance at the Boat Office from 5 A.M. to 6 P.M., so as to be ready to provide, on immediate notice, their boats for hire, according to provisions of Act IV. of 1842, Section 12.

2. The Superintendent shall keep a register of all boats licensed to ply for hire, showing their respective numbers and capacity, distinguishing the boats intended for passenger traffic from those suited for goods only.

3. No boats shall be hired except through the Boat Office. *All boats shall be allotted in rotation the evening before for next day's work by the Superintendent, who will apportion them according to application, as fairly as he can with reference to the shipping in the port and work to be done.*‡ Cases of boats not found ready for employment in proper turn to be reported to the Executive Officer, Marine Department.

‡ NOTE.—The foregoing stipulation underlined was the rule in the Government Boat Pay Office abolished in 1842, and it now rests with Government to decide whether it should again be made a rule for the guidance of the Superintendent of the office about to be established.

4. All payments of boat hire shall be made through the Boat Office.

5. Single engagements to be paid in cash on hire of the boat; large dealings to be adjusted by bills submitted by the Superintendent. Boat hire paid to boatmen out of the Boat Office to be illegal and not recognized by the Superintendent, who can again demand payment in his office.

6. The Superintendent shall pay the boat-owners at stated times, deducting the stipulated fee of one anna per single trip.

(Signed) H. D. E. DALRYMPLE,
Master Attendant.

No. 4. From the Chairman of the Chamber of Commerce, to the Acting Chief Secretary to Government, Fort St. George, dated Madras, 14th June 1871.

As the Government were pleased, in their Order, 4th August 1870, No. 223, after a reference to the Chamber of Commerce, to "defer for the present the establishment of a Boat Pay Office under the control of an officer of Government," the members of the Chamber have now learnt with considerable surprize that without any further communication with the mercantile community the Government have, in their Order of the 30th May 1871, No. 153, resolved to sanction the re-establishment, under the supervision of the Master Attendant, of a Boat Pay Office, on the condition that it shall be self-supporting.

2. That the Master Attendant is convinced that by such a measure the alleged grievances of the boat-owners will be permanently redressed the Chamber do not for a moment venture to doubt, though they presume to think that the use of such words as "frauds and acts of oppression practised by the Shipping Dubashes and Conicopolies" in Proceedings that the Government have allowed to be published was somewhat hazardous, the persons implicated being presumably innocent until proved guilty of fraudulent conduct. But, in matters intimately connected with their own business, the members of the Chamber maintain that their opinions, based on practical experience, are entitled to at least as much consideration as are the purely theoretical opinions of the Master Attendant. In the present case, that officer, with a persistency that has not been daunted by repeated failure, has urged on the Government the necessity of affording protection of an exceptional kind to boat-owners, the victims of those Dubashes whose demerits are not sufficiently admitted by their employers. In his letter to the Government of the 14th April last he submits a list of debts which have come under his notice and which are still due to boat-owners by Dubashes and Conicopolies, and he observes that the "original statements verified by the signatures of the boat-owners are principally in Tamil and he retains them in his office for reference when required." The obvious reply to this is that, if the debts in question admit of verification, the creditors already possess in the Small Cause Court the remedy that by other members of the community is deemed sufficient for the recovery of comparatively small debts. But the Master Attendant holds that it is the duty of the Government to provide these boat-owners with still greater facilities for recovering their dues, and the Government, in acting upon his strong recommendation, virtually ignore the object for which the Small Cause Court was established.

3. Were the Chamber satisfied that the majority of the boat-owners feel the want of a Boat Pay Office, the members of the Chamber would offer no opposition to compliance with such a wish. But the Chamber are very far from convinced that the feeling that some of the boat-owners have from time to time expressed to the Master Attendant may be fairly regarded as general; and, in the absence of any

evidence to that effect which would weigh with any merchant of local experience, the Chamber cannot avoid regarding the re-establishment of a Boat Pay Office as an injudicious interference with the liberty of trade. I am, therefore, I regret to add, desired to convey to you the emphatic opinion of the Chamber that the remedy approved by the Government must in the long run prove worse than the disease. The Master Attendant has for years impugned the intelligence of the mercantile community as regards the trust reposed in the Dubashes, and he yet seems not to have any fear about the abuse in his own office of similar confidence that he is so anxious to place in his native subordinates. That the Dubashes charge some percentage under the present system on the boat hire that passes through their hands, no one who has had any experience of the traditions and customs of this country will care to deny; but will the substitutes for the Dubashes at the Master Attendant's office be less accessible to dustoorie?

4. There is another point which does not seem to have had the consideration of the Government. The Boat Pay Office has been re-established, and a notification, in accordance with an Act of the Legislative Council, regulating the boat hire is still in force; but the use of the Boat Pay Office remains voluntary, and must continue to do so until a special enactment rendering its use by boat-owners compulsory becomes law. The Acting Master Attendant, in his letter to Government of the 3rd June 1870, published in the Proceedings of Government, Marine Department, 4th August last, suggested for the Boat Pay Office an establishment comprising—

	Per mensem. RS.
One Superintendent	300
,, Head Clerk	70
,, Cashkeeper and Accountant	35
Two Conicopolies, at Rupees 15 each	30
,, Peons, at Rupees 7 each	14
Total...	449

and he estimated that a fee of one anna per trip of registered boats would give for an average year Rupees 758-9-0 per mensem. But this assumes that all the boats make use of the office, whereas, in all probability, especially during a busy season, a large number of boat-owners would not feel the necessity of taking orders or drawing their hire from the Pay Office, and shippers, with whom time is of great importance, would be disposed to give their business to those boat-owners only who can set about their work without any circumlocution. Thus, in the long run, the owners who are just now so active in their entreaties for the protection of the Government may find it to their interest to act independently of the Government in the matter of their own employment and hire. Trade is just now slack, but with a return of activity boat-owners may reasonably count upon more remunerative rates than the legal rates fixed by the Government, and it is not in human nature to allow exceptionally high rates of remuneration, unauthorized by the Government to be current, without making some effort to share the spoil. In adverse times, on the other hand, when the supply of boats is in excess of the demand, there may be a disposition, on the part of some owners, to employ the

agency of Government in securing full rates; but it is questionable whether the fees levied on the comparatively few trips when business is dull will suffice to cover the cost of such an establishment as is suggested by the Master Attendant. The chances, then, of the Boat Pay Office being self-supporting seem to the Chamber to be small, both in active and quiet seasons.

5. I am, therefore, desired to express, on behalf of the Chamber, a hope that the Government may see fit to re-consider their Order of the 30th ultimo.

6. At the same time, I have the honour to state that the value to the mercantile community of a legal tariff of boat hire that is but rarely availed of is more imaginary than real. To the Government it may be important to have some limit placed on their expenditure in landing and shipping troops and stores; but it has to be remembered that while the Government may, under the present system, pay less boat hire in a time of active trade than merchants are willing to give, they pay more during the dull times than merchants find it necessary to do; and it is questionable whether in the long run the Government do not suffer by what amounts to an interference, however well designed, with those laws of supply and demand which are independent of all Governments. In matters regulating the intercourse between private shippers, their Dubashes, and the boat-owners they employ, the Master Attendant's maxim should be to let trade take care of itself, as it is well able to do under a liberal Government.

Referred to the Acting Advocate-General, with previous papers, for his opinion whether the Government can legally establish a Boat Office at Madras and prescribe rules for its working, as proposed by the Master Attendant, either under Act IV.* of 1842 or under Section 7, Clause 11 of Act XXII. of 1855 with the sanction of the Government of India, or whether it will be necessary to apply to the Legislature for a special enactment to enable the Government to do so. The Acting Advocate-General will communicate with the Master Attendant on the subject.

* Amended by Madras Act IV. of 1869.

FORT ST. GEORGE,
20th June 1871.

(Signed) W. HUDLESTON,
Acting Chief Secretary.

No. 5. From the Government Solicitor, Madras, to the Acting Chief Secretary to Government, Fort St. George, dated Madras, 26th June 1871, No. 257, submitting the following Opinion of the Acting Advocate-General:—

OPINION.

I am of opinion that rules such as are proposed by the Master Attendant cannot be passed without legislative enactment. Those rules aim at regulating the mode and rotation in which boats are to be employed, and at arranging the mode in which the persons who employ such boats are to pay for them in a manner different from that which the ordinary rules of law would prescribe. No provisions are contained in either Act IV. of 1842 or in Act XXII. of 1855 under which such rules could be framed.

(Signed) JOHN D. MAYNE,
Acting Advocate-General.

June 26th, 1871.

No. 6. ORDER THEREON, 6th July 1871, No. 193.

As it appears from the opinion of the Acting Advocate-General that a legislative enactment would be necessary to enforce the rules which the Master Attendant considers necessary for the conduct of a Boat Office, and to give legal effect to the arrangements essential for making it self-supporting while the boat-owners are by no means unanimous in advocating the measure, and considerable difference of opinion exists among the community interested in the subject as to its expediency and probable effectiveness, the Government resolve to abandon the design and to withdraw the conditional sanction conveyed in their Proceedings of 30th May 1871, No. 153, Marine.

(True Extract.)

(Signed) W. Hudleston
Acting Chief Secretary.

To the Master Attendant, Madras.
„ Chairman, Chamber of Commerce.
„ Government Solicitor, Madras.

Exd. A. S. Rodgers.

Proceedings of the Madras Government, Marine Department,
20th July 1871.

No. 17. Read the following letter from the Master Attendant, Madras, to the Chief Secretary to Government, Fort St. George, dated Madras, 17th July 1871, No. 4199:—

I have the honour to acknowledge receipt of the Order of Government dated 6th July 1871,* and letter from the Chamber of Commerce† on which the Order is founded.

* No. 193.

† Dated 14th June 1871, No. 4.

2. I regret to find that the project of a Boat Pay Office, similar to the former one which well stood the test of years, has been abandoned, and that the unfortunate boatmen of Madras are still to be left to the tender mercies of the dubashes, who are now, to my knowledge, appropriating twenty-five per cent.‡ out of the hire of every masulah boat plying to and from the Pier, the balance due, of Rupees 1-8-0, being, according to "the traditions and customs of this country,"§ kept back for months.

‡ Viz., 8 Annas out of the hire of Rupees 2 per trip.

§ *Vide* Chamber's letter, paragraph 3.

3. As, in all my letters to Government recommending the petitions of a majority of the boat-owners to favourable consideration, I have avoided all mention of the mercantile community of Madras, for whom I entertain the highest respect, I am not to blame for the pointed allusions to me in this curious letter under review, which is signed by the Chairman, who is, I may observe, in favour of a Boat Pay Office, and whose opinions on the subject‖ are already officially before Government.

‖ *Vide* Report of Committee on Pier Tolls.

No. 18. ORDER THEREON, 20th July 1871, No. 205.

To be recorded.

(True Extract.)

R. S. ELLIS,
Chief Secretary.

Exd. A. S. Rodgers.

Proceedings of the Madras Government, Marine Department, 23rd August 1871.

No. 37. Read the following letter from the Master Attendant, Madras, to the Chief Secretary to Government, Fort St. George, dated Madras, 10th August 1871, No. 4674:—

Administrative Department.

I have the honour to forward to Government a letter to my address signed by the owners of no less than 160 boats, and to explain that, as the owners of only 37 boats are silent, or left unaccounted for, there is now a majority of upwards of three to one in favour of some action being taken for the protection of boat-owners and their crews, numbering about 2,060 souls.*

Note.—Owners who now petition own ... ... 160 boats.
Those against petition ... 37
Total of boats at work ... 197

* Owners, their Deputies, and crews of 160 boats.

2. As my opinions on this subject have already been submitted to Government on various occasions, I need not repeat them, but only express my earnest hope that this vexed question may be settled on a basis of equal justice to all parties concerned.

3. By the present Boat Act† an overcharge of boat-hire by boat-owner or boatman is treated as a criminal offence, and the culprit is liable, on conviction before a Magistrate,‡ to fine or imprisonment, whereas a shipping dubash, who deducts for his perquisites one-third and often one-half of the legal boat-hire, well and truly earned, does so with impunity, unless sued in a Civil Court for the amount of hire unpaid, and it will be observed by the accompanying petition from the boat-owners that this mode of redress is rendered a dead letter.

† Act IV. of 1842.

‡ *Vide* Sections 13 and 24 of Act IV. of 1842.

4. In London, the centre of civilization, a cabman, who is denied his legal rate of hire, can immediately enforce payment in full at a Police Court, be the defendant prince or peasant; and I do not see why in this city equal justice should not also be administered.

5. A Boat Pay Office would set all to rights without the law being appealed to by the hirers or hired.

From Mr. R. ROSS and other Boat-owners, to the Master Attendant, Madras, dated Madras, 7th August 1871.

We, the undersigned boat-owners, observe with great regret that Government have thought fit, upon a protest by the Chamber of Commerce, to withdraw the sanction accorded for the re-establishment of a Boat Office. It is evident to us that the Chamber has been misled in the making of this representation by their ship dubashes, and that, in doing so, the interest of the dubashes, and not that of the mercantile community and the public, has been sought to be secured. That these ship dubashes should so vehemently oppose the establishment of a Boat Office, which proposes to charge an uniform and moderate rate, is not surprising when it is considered that the existence of such an office would be a bar to their victimising the captains of ships and merchants in the matter of boat-hire. The Chamber of Commerce, taking the view of their ship dubashes, argue that the establishment of a Boat Office would impose a restriction on free trade and would put merchants and others to much inconvenience. We believe that the merchants and the public, in place of suffering inconvenience by such an establishment, wil be considerable gainers thereby, as you will readily perceive when you reflect that, whereas under the present system they have to pay whatever exorbitant charge of boat-hire may be demanded, they will, when the Boat Office is established, have to pay one uniform low rate for any number of boats they may wish to employ. In support of our statement we beg to bring a few instances, which can be authenticated, to your notice. Firstly, two or three months ago some of the native merchants, who were in the habit of

shipping goods to Calcutta by the steamers of a certain Company, sent up a serious complaint to the Agents of the said steamers in Calcutta, against the ship dubash of a certain firm in Madras for having charged them with 7 to 8 Rupees per trip for boat-hire, while he only paid 1½ Rupees per trip to the boat-owners. The Agents in Calcutta, as we are informed and believe, immediately referred the matter to the Agents in Madras for investigation, together with orders to stop all wages due to the dubash on the account of the steamers, which was done. Another instance is that a boat-owner who joined in the petition with the said dubash to Government against the establishment of a Boat Office, and who is employed in the office of the Peninsular and Oriental Company as a Manager, employs his boats almost exclusively in the landing of packages coming by the Peninsular and Oriental Company's Steamers, and in no instance is a smaller charge than 8 Annas made on each package however small, though a boat may bring on shore as many as fifty such small packages, while the boat-hire is only 2½ Rupees per trip. We are confident the Chamber of Commerce on inquiry will find that these matters are not overstated, and must admit that the Boat office will check all evils, and promote the public good. We observe that the Chamber, in reference to our complaint that the ship dubashes who employ our boats will not pay our dues, remark that we have our remedy against them by resorting to the Small Cause Court; but we find from experience that the result of such a course is that they refuse to employ our boats and prevent others also from doing so. And since Government has withdrawn the sanction for the Boat Office, the dubashes and conicopillays have taken great advantage over the boat-owners, and are paying a great deal of lower rates than what it used to be, and compelling the boatmen to overload their boats or else they will not employ them; and, notwithstanding this, some of the dubashes, &c., have plainly told the boat-owners as well as the boatmen to carry their cargo direct to the shore and not to the pier, and if they do, the boat-hire will be only one Rupee per trip; these inconveniences have prevented many of the boat-owners from floating their boats. We, therefore, still look to you as a protector of our interest, and beg that you will be pleased to use your influence once more on our behalf with Government for the establishment of the Boat Office, as the boat-owners have almost been brought to ruin. If Government will not do so they should at least, we humbly submit, abolish the tariff, for it is hard that ship dubashes and others should be free to charge shippers whatever exorbitant rate of boat-hire they think proper, while we boat-owners are restricted to a low scale of charges imposed by the tariff. In conclusion, we beg to state that, if Government consider the rate of one Anna per trip proposed by us to be allowed for the support of the Boat Office insufficient, we shall be glad to increase the rate to two Annas per trip of a Masulah boat, and on the large Pier Boats two Annas for every Masulah boat-load of cargo they carry, and let the establishment be a strong one.

(Signed) R. ROSS, and 129 others.

No. 38. ORDER THEREON, 23rd August 1871, No. 244.

As the Government are unable under Act IV. of 1842 to enforce the registration of boats at the port of Madras, they do not think the institution of a Boat Pay Office would offer an effectual remedy for the evil complained of; but they will consider the question in connexion with any amendment of the law which may take place hereafter.

(True Extract.)

(Signed) J. de C. Colvin, Captain, R. E.,
Under Secretary, P. W. D.,
for *Chief Secretary.*

To the Master Attendant, Madras.
„ Legislative Department.

Exd. J. Wright.

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Read the following papers:—

No. 198. From the Master Attendant, Administrative Department, to the Secretary to Government, Public Works Department, dated Madras, 30th May 1872, No. 3,065.

I HAVE the honour to forward Report of Committee appointed by Government* to decide on the best means of restoring the Madras Pier. A scheme for ensuring its future safety will follow.

* Under orders of 13th May 1872, No. 1,219.

Report of the Pier Committee.

THE Committee appointed by Government in their Order of the 13th May 1872, No. 1,219, for the purpose of reporting on the best means of restoring the Madras Pier and ensuring its future safety, beg to report as follows:—

1. We have made as thorough an inspection as was in our power of the damage which the Pier sustained during the late storm. On the last occasion of our inspection we were joined by Mr. Grainger, the General Superintendent of Public Works Stores and Workshops, and had the advantage of his advice.

2. We have come to the conclusion that it is at present impossible for us to make any definite and satisfactory recommendation on the subject of restoring the Pier; and in order that we may be placed in a position to submit satisfactory proposals, we solicit permission to make experiments in screwing piles along the original line of the Pier, in the ground supposed to be occupied by the hull of the *Saint Bernard*. We believe that Mr. Grainger is prepared to supply us with tools, which we hope will enable us to get the piles down through the hull without much difficulty.

3. With the permission of Government we propose that the experiments should be conducted, under our general directions, by Mr. Grainger, under whom the work of restoring the Pier was successfully carried out in 1869, the services of the Pier establishment under Mr. Sadler being made available for his assistance.

4. We find great difficulty in naming any sum as being likely to represent the cost of the experiments which we propose to carry out; but we request that a sum of Rupees 10,000 may be placed at our disposal for the purpose, although we trust that we shall be in a position to submit definite and satisfactory proposals long before that sum is spent.

MADRAS,
30*th May* 1872.

(Signed) H. D. E. DALRYMPLE,
Master Attendant, Administrative Department.
(Signed) B. ANDERSON,
Chief Engineer, Madras Railway Company.
(Signed) J. H. M. SHAW-STEWART, Lieut.-Colonel, R.E.,
Consulting Engineer for Railways.

No. 199. From the Pier Committee, to the Secretary to Government, Public Works Department, dated Madras, 10th June 1872.

WITH reference to our report regarding repair of the Pier sent in to Government on the 30th ultimo, we beg leave to forward a rough sketch of the plan we propose for protecting the Pier from further damage.

2. At each side of the Pier, to the north and to the south, we propose to place one or two groups of piles. Each group will consist of one central pile, screwed vertically, with six or more piles surrounding the central one, and inclined to it at an angle of about 70°. These piles will be braced together in the strongest possible manner, and the resisting power of each group will be still further increased by their being secured to anchors firmly fastened in the ground, the northern groups being anchored towards the north, and the southern groups towards the

south. The approximate position of each group, and the mode in which it will be anchored are shown in the sketch. Each group of piles will rise about 15 feet above the mean level of the sea. We propose to connect the groups upon each side of the Pier with each other, and with the outer end of the T head, by means of a heavy chain cable, which in rough or threatening weather will be suspended from the highest points of the groups of piles, and will hang therefrom in a curve, the lowest point of the curve being some 10 feet above mean sea level. In ordinary weather, the cables will be lowered so as to admit the free passage of boats.

3. By these means a ship adrift will be guided into the surf clear of the Pier, and safe from causing damage to that structure.

4. We also propose to strengthen the T head with horizontal bracing and iron knees, which will render that part of the Pier safe from damage.

(Signed) H. D. E. DALRYMPLE,
Master Attendant, Administrative Department.
(„) B. ANDERSON,
Chief Engineer, Madras Railway.
(„) J. H. M. SHAW-STEWART, Lieut.-Colonel, R.E.,
Consulting Engineer for Railways.

No. 200. ORDER THEREON, 12th June 1872, No. 1,457.

CIVIL WORKS, No. 18.

BOTH in the letter from the Master Attendant recorded with G. O., No. 1,219, of 13th May, and in the report of the Pier Committee, dated 30th May 1872, it seems to be assumed as a matter of course that the Pier is to be restored. Whereas it was not the intention of Government, under present financial circumstances, to have sanctioned any expenditure on the work without previous assurance as to its probable cost, the means of averting future damage, and its management so as to repay in some measure its cost.

2. The papers now submitted give some reasonable hope that, if repaired, the Pier may be capable of protection from future damage, and in the hopes of thereby obtaining a reliable estimate of the cost of restoring the structure as originally planned the Government grant an advance of Rupees 5,000 from Port Funds for experimenting as intended. Reference will also be made to the Marine Department for inquiry what measures may be calculated to induce a more general use of the Pier by the native public and shippers in particular, in order that it may be worked hereafter more remuneratively.

(True Extract.)
igned) R. F. OAKES, Captain, R. E.,
Acting Joint Secretary to Government.

To the President of the Pier Committee.
„ Controller of Public Works Accounts.
„ Superintending Engineer, 4th Division.
„ Marine Department.

Exd. S. T. Augustin.

Order

29

Order in the Marine Department 1st July 1872, No. 156.

The Proceedings of Government in the Marine Department, noted at foot, will be communicated to the Public Works Department with reference to the concluding clause of paragraph 2 of the foregoing Order:

Proceedings dated 30th May 1871. No. 153.
—"— 6th July 1871 No. 193.
—"— 20th "— 1871 No. 205.
—"— 23rd August 1871 No. 244.

/True Extract/

Ag Under Secretary.

To
The Public Works Department
with the papers.

Pro 13th January 1872 Nos 222-223

P. W. 1872 Depart
Pres of Govt for Desp
No 3272.

Pres of the Madras Govt
Marine Depart

Dated 1st
Read 5th } July 1872.

No 156.

Forwarding copies & orders with reference to the remarks in para 2 of G. O. No 1457 of 1872 relative to the enquiry to be made as to what measures should be adopted to ensure a more general use of the Madras Pier in order to its being worked more remuneratively—

No 2975 - 16 Decr/72

No 317

Dup to Adj & Pub/72

In submitting for consideration the Report of the Committee on the best means of ensuring the Madras Pier and ensuring its future safety, the Chief Engineer of the P. W. Dept. has the honour to state that his first impression was that a total sum of £ 1,40,000 would have amply sufficed to carry out the Committee's proposals — Whereof £ 44000 is the price of materials already available and paid for; £ 64,200 the cost of those to be procured and £ 31,500 the probable charges for establishment, Interest &c.

The last mentioned item is within £ 1000 or 3 per cent of the total cost of material at site, and nearly treble the Engineer estimated charges for labour &c. necessary in putting up Screw Pile Bridges, which are 2½ and 5 per cent respectively or 13½ per cent in all. While the prospects of completion of 87½ per cent in the case of the Pier Work — and his

6

justification for such a change is found in the actual cost of restoration of the Pier in 1868-69 and 1869-70, which was Rs

Statement Rs 648-6-4

Cash Voucher " 1,09,446-8-7

Rs 1,74,263-1-11

It might be remitted to Mr. Brandreth's report otherwise. daily expenses which credit with expenses, a contract especially as the sum of Rs 1242 stated by the Committee to have carried test out. The expense of the supplemental borings along the line of the Gate, last of planning in position and of four piles. Which work is presumed was carried out Entirely by Chunny his Servants on Private Leave; Mr Brandreth had no opportunity of testing the correctness of charges the cost of work actually performed —

The Govt of the latter part of para 2 of G.O. No 487 of 12th June has kindly been met by the Marine Department by supply of certain fur-

Yes No

B.N.

H.

niture — That object was, to elicit further orders having reference to the Establishment kept up for maintenance of the Pier and regulating its use by the public — The cost has direct reference to the question whether the repairs now proposed should be carried out or not — Or, as at present constituted, it appears to cover up the whole of the Annual Collections —

These amounted in 1870-71 to Rs 17,760, while the Establishment costs Rs 17254 as per Statement annexed, viz.

Pier Master	Rs 300
Traffic Manager	" 100
4 Quarter Masters	" 225
8 Clerks, Moneytakers, Coolies	" 114½
27 Servants	" 265
2 Asst. Masters Attendant	" 50
Manager Marine Office	" 50
Contingencies	" 333⅓
	Rs 1437 6/12
Annual Total	Rs 17254

C.W.M.

25

Revised Estimate of the probable cost of repairing the present gap in the Madras Pier with Teakwood Beams and 11 inch planking complete as per Plan No 1.

Particulars	No	Weight Tons	Cwts	Qrs	lbs	Per	Total weight Tons	Cwts	Qrs	lbs	Rate	Per	Amount
Outside Piles 8 inch diameter	18	3	19	2	"	each	71	11	"	"	230	" " Ton	16,456 8
Inner Piles 6 " do	17	2	3	2	"	"	36	19	2	"	230	" " "	8,604 4
Cast Iron caps for 8 inch Piles	18	"	2	3	"	"	2	9	2	"	230	" " "	569 4
Do Do 6 " do	17	"	2	1	2	"	1	18	2	6	230	" " "	443 5
Do Screws 3 feet diameter for Piles	35	"	4	"	7	"	7	2	"	21	230	" " "	1,635 2
Round Iron Diagonal Braces Vertical with clamps bolts and Nuts	18	"	6	1	18	"	5	15	1	16	230	" " "	1327 "
T Do Do Do (two to a set / six to a set)	10	1	11	"	"	"	15	10	"	"	230	" " "	3565 "
Cross Braces horizontal 44 feet long each	21	"	19	2	10	"	20	11	1	11	287	5 1 each	6,033 10
Longitudinal Braces (intervening) 138 feet each	2	3	14	3	7	"	7	9	2	14	1007	" 6 "	2191 1
Do Do (outside) 324 feet each	2	5	15	24	"	"	11	11	"	8	1572	10 7 "	3345 5
Diagonal Braces horizontal 24 feet each	571	"	10	2	21	"	28	17	"	14	156	11 6 "	8462 13
Bolts for timber fastening 1½ inch iron 2½ feet long	200	"	"	"	19	"	1	13	3	20	3	9 " "	712 8
Do Do Do 1¼ feet long	200	"	"	"	11	"	"	19	2	16	2	1 " "	412 8
Spike nails 6 inch for flooring planks	4000	"	"	"	13	"	"	11	3	17	"	3 " lb	250 "
Wrought Iron Standards for Hand rails	40	"	"	"	22	"	"	7	3	12	230	" " Ton	90 5
Cleats for Hand Rails	ft 340						"	13	1	16	230	" " "	154 "
							214	2	"	6			54,155 12
Do Do 210'×15"×12" in two pieces	10	"	262	6	"	=	2625	"	"				
Do Braces between longitudinal beams 210'×5"×4"	7	"	29	2	"	=	204	2	"		2 14 "	cft	16,647 "
Do Do Do Do 40'×5"×4"	20	"	5	6	8	=	111	1	4				
Do Planking 180'×40'×4"							2400	"	"				
							116	"	"	"			
		Tons					330	2	"	6			70,802 13
Cartage at Rs 1 — per ton													330 "
													71,132 13
Labor for putting up at 50 p cent.													35,566 6
													106,699 3
Contingencies at 25 p cent.													26,674 13
Total Estimated Cost Rupees													133,374 "

Public Works Workshops
Chepauk 20th August 1872

J Wolfenden Lt Col R.E.
Superintendent P.W. Workshops & Stores

Revised Estimate of the probable cost of three groups of seven piles in each and guide chain
as shewn in Plan No. 2.

Particulars	No.	Weight Tons	Cwt.	Qrs	Lbs	Per	Total Weight Tons	Cwt.	Qrs	Lbs	Rate	Per	Amount
Piles 6 inch diameter for three groups at 7 to each	21	2	3	2	"	each	115	13	2	4	230	"	" Ton	10,506	14
Cast Iron Screws for Piles	21	"	4	1	7	"	4	10	2	7	230	"	" "	1041	7
Wrought Iron Caps for Groups	3	"	7	"	19	"	1	1	2	1	111	11	1 each	335	1
Horizontal Braces for do	Sets 3	1	4	1	"	"	3	12	3	"	357	6	6 "	1072	3
Eye Bars on T ends for Chains	2	"	10	"	10	"	1	"	"	20	135	13	9 "	271	11
Chains 1 1/4 inch	feet 1200	"	"	"	10	4	5	7	"	16	30	"	" Cwt.	3214	4
							61	5	2	16				18,440	"
Earthwork at Rs. 1 per ton														161	5
														18,601	6
Labor for putting up at 50 per cent														8250	11
														26,852	1
Contingencies at 25 per cent														6,188	"
Total Estimated cost Rupees														33,040	1

Public Works Workshops
Calcutta 20th August 1852

Inspector.

Asst. Engr.
for Superintendent Public Works Workshops & Stores

D

Revised Estimate of the probable cost of strengthening T head by horizontal braces and round iron knee straps as shewn in Plan No 3.

Particulars	No	Weight Tons	Cwt	Qrs	lbs	Rs	Total Weight Tons	Cwt	Qrs	lbs	Rate	Rs	Amount
Cross Braces horizontal each 44 feet long	16	"	19	2	10	each	15	13	1	20	287	51	each 4,577 1 4
Longitudinal Do Do " 125 feet long	4	3	13	1	26	"	14	13	3	20	1877	7	1 " 4,569 12 11
Diagonal Do Do " 1" feet long	12	"	7	2	8	"	37	5	"	16	111	"	2 " 7,902 12 4
Do Do Do " 16 feet long	18	"	8	1	24	"	7	12	1	12	124	1	1 " 2233 3 6
Round Iron Knee Straps with clamps and bolts	24	"	3	3	7	"	1	12	"	"	69	"	" " 1,656 " "
							89	16	3	12			20,788 13 2
Cartlurie at Rs 1 per ton													70 " "
													20858 13 2
Labor for putting up at 50 per cent													10429 6 7
													31288 3 9
Contingencies at 25 per cent.													7822 1 "
Total Estimated cost in Rupees													39110 4 9

Public Works Workshop
Chepauk 20th August 1872

Approved
Lt Col R E
Inspector of Public Works

45-1

No

Madras
6th September 1872.

To

The Secretary to Government
Public Works Department
Fort Saint George

Sir

With reference to the order of Government dated the 12th June 1872 No 1457, we have the honour to report that of the Rupees 5000 placed at our disposal for the purpose of making experiments to decide the possibility of restoring the pier along the line originally occupied by it, we have spent Rupees 1242-7-6, and we have arrived at the conclusion that no great difficulty will be experienced in screwing piles along the whole of the gap. The abovementioned outlay has not only covered the cost of making experimental borings along the line of the gap, but the gap itself has been materially shortened — one row, consisting of four piles having been placed in position at the west or inner end.

2 With the assistance of the General Superintendent of Public Works Stores, plans and estimates have been prepared for executing the work sketched out in our letter of the 10th June, and these we have now the honour to submit.

3 It will be seen that the estimates are in

[illegible] 7-447- [illegible]

in three parts. First for closing the present gap, amounting to Rupees 133374. Second, for the protective works recommended by us, amounting to Rupees 30,940. Third, for strengthening the pier-head, amounting to Rupees 39,110. The total amount of the estimates comes to Rupees 203424.

4 Of this large sum it will be observed that the cost of materials, including carriage, is Rupees 108493: that the estimated cost of labour is Rupees 54246: and that no less a sum than Rupees 40685 has been allowed for contingencies. The mode in which the last two items have been calculated is simple. The cost of labour is taken at 50 per cent upon the value of the materials; and a sum equal to 25 per cents upon the cost of materials and labour taken together, is allowed for contingencies. Mr. Grainger, by whom these estimates were originally prepared, was unwilling to reduce these amounts; and as the services of that gentleman were specially placed at our disposal for the preparation of the estimates, we have not felt ourselves at liberty to alter his calculations, the more so as they are founded upon the experience gained by him when the pier was restored three years ago. At the same time we are bound to state that in our opinion, the estimated amounts for labour and contingencies, which together come to no less than Rupees 94,931 are excessive. While fully recognising the great difficulty of framing any accurate estimate of the cost of work of this nature, we are of opinion that it ought to be carried out in six months, and we cannot bring ourselves to believe that the entire cost for labour &c., ought to exceed Rupees 5000 per mensem. The estimate for these items would thus be reduced to Rupees 30000, being less than one third of the sum entered in Mr. Grainger's estimates.

5. With regard to the estimated cost of the materials, which comes to no less than Rupees 108,493, we beg to remind the Government that the articles noted in the margin have been already procured from England for the repair of the pier, and are now lying stored on the beach in Abercrombie's Battery. The value of these articles, as entered in the estimate, amounts to Rupees 44,292; so that the actual cost to be now paid for the materials required for restoring and protecting the pier may be reduced from Rupees 108,493 to Rupees 66,201.

	Rs.	a.	p.
18 piles 8" diam:	1,456	8	-
38 do. 6" diam:	19,009	8	-
18 caps for 8" piles	669	4	-
17 do. for 6" piles	443	5	10
56 screws for piles	2,677	10	-
18 round diagonal braces	1327	-	3
10 T do.	3565	-	-
40 standards for handrails	90	5	9
Chains for do.	154	-	3
Rupees	44,292	10	1

6 We beg to express our regret at the delay which

/ 7.44/- are allowed for

which has occurred on the submission of these estimates. The Government are aware that every member of the Committee has official duties which occupy almost all his time, and since the formation of the Committee our duties have obliged us to be absent from Madras on several occasions. Immediately after the estimates were first prepared, Mr. Grainger was obliged by ill health to leave Madras, and the revision of the estimates was kindly undertaken by Colonel Goddard, who is performing Mr. Grainger's duties during his absence. To both of these gentlemen we beg to express our best thanks for the assistance we have received from them.

We have the honour to be
Sir
Your most obedient servants

W. D. [illegible]
Master Attendant.
Administrative Department.

[illegible] M. Gl. Regt.

Blissfield Archdeacon
Chief Engineer
Madras W.

No 1599

1872

Public Works Stores & Workshops

Captain R.E. Oct. 18/72

Sir,

The Executive Engineer

Public Works Stores & Workshops

To

The Superintending Engineer

4th Division

Madras

Sir

In reply to yours No 3000 of

Public Works Report

Return to

Letter from Supdt

10th October 1872, forwarding for-

Office Records

Early report Memo No 137, from

Chief Engineers

the Chief Engineer & P.W.D. requesting

information relative to the heavy

Cash outlay as Rs 109,447 in

Copy

the maintenance of the Madras Pier

in 1868/69 & 1869/70. I have the

honor to enclose a Statement of

Expenditure / Stores from the Monthly

Progress Report / showing the de-

duction of the above amount

of Rs 109,447. The Estimate for

Public Works Stores & Workshops

Captain R.E. Sept. 18/72

From

The Executive Engineer

4th Division

Madras

To

The Secretary to Govt.

Public Works Department

Fort St George.

Dated 6 September 1872

Rec'd 28 " "

No 5429.

Submitting a requisition for

certain articles for restoring

the Pier along the line originally

occupied by Lt. Taylor's plan

and estimate for the work.

Rs 29,75,000 10th Nov 72

Forwarded to the S.S. 4th D. with re-

ference to his letter No 3067 of 15th

October -

To be returned without delay

accompanied by Mr Simmons

Revised Estimate already called

for - Printed copy will hereafter

be supplied -

Engr.

25.10.72

the repair of the Pier in 1869. dated and recorded in G.O. 6th February 1869. Pl. 382. Which signed by Mr. Black, the Engineer that year Enclosed the Report the Pier, was prepared by me, and the items taken for each of estimates including Tools &c, and Contingencies were calculated in a similar manner, as in the Estimate of 1869 under Consideration viz 50% for Labor and 50% for Contingencies, the approximate Quantities of which were shewn by the dock departments Carrying sick of the work as per enclosed Statement to be rather less than the amount necessary for Rs. 170000 had been expended on the restorations of the South side, leaving only Rs. 110000 for the North side

2. There were no special causes necessitating heavy sick and day other than those incidental to works of this nature viz the Expenditures of the materials employed, for of the amount 109447 Rupees 76,718. Rupees was paid to the P.W. Workshops for the supply of Teak timber, beams, planking, Caps for piles Tools &c, leaving Rs. 32729 as the Expenditure on Labor on the work (viz the carrying sick of which it was often necessary to take up and reserve piles in different places on account of obstruction met with when the piles were within a few feet of their proper depths)

3. In the preparation of the former Estimate, the ward Labor was extended

intended to include the cost of
materials and tools, work done
labour only, and with that
meaning it was used in the
present estimate - In the
abstract of estimated Estimate
Rs. 61,931. 5. 5. of the 2nd Jurisdiction
under the head Labor and
Rs. 114832, 15. 2 under the head
Materials, so that the cost of
erection is 54 per cent of the
cost of the materials

4. Considering the original cost
of the Pier, that in its construction
Iron, the Caps were not
fixed to the heads of the
piles, and that Baltic timber
was used for Beams, the
cost

cost of restoring the South side
in 1868/69. with Campane very
favourably. for then the Caps
were securely fastened to the
heads of the piles and wrought
iron Girders and teak timber
beams were employed

5. The total cost of the Pier as
per Contract was Rs 10,79,486
which included four steam Cranes
and several Turn tables, the cost
of which could not exceed
Rs 20,000 and as the work was
similar Steamboat, and contained
488 piles, we get Rs. 2264. as the
average cost per pile including
superstructure of 100 square
feet, and in the repairs of 1869/70
the 2nd Jurisdiction was Rs. 1,76,764.
and sixty three new piles were

driven

Screwed in the gab B.2794 as the average cost per pile, including superstructure of 135 Square feet or 25.6 per cent in excess of the original rates for Contract ing the Pier

6. In reply to Paras 2 of the Chief Engineers Memo, I respectfully beg to state that it is not possible to make any deduction whatever in the present Estimate, and if it is considered

7. The Pier Committee in their Report, Para 1, state that only B.1242.7.6. had been Expended, and that this had "not entirely Carried the Cost of making 24 Pinnacled bearings along the line of the gab", but that "the remaining 9 pile" had been "placed in position" - Such being Carried in the putting down of a two inch Auger at the intended site of each pile, if the Auger must

in the preparation of the first
Cost Estimate — This amount
was increased to £.1616. 10. 6
in the Master Attendants letter
No. 6116 of 30th Oct. 1872 but as this
amount did not include the
Cost of the piles, or the pay of
Mr. Harris, the Foreman, and the
Pier Master and his Establish-
ment who were employed on
the work, and should have
been charged on the work
as in 1869/70. the actual expenses
incurred in the placing in po-
sition of the four piles is

To Cost of 2. 8" Piles length 3. 19. 2 Tons. C. 2.
Each at £.230 per ton ——— £. 1628. 8. —
" 2. 6" Piles length 3. 3. 2
Each at £. 230 per ton ——— " 1000. 8. —
2829. — —

/ / / /

£. 2829. — —

To amount due to P.W. Workshops ... 1050. 12. —
" per Masters Attendants letter No. 6116. ... 1616. 10. 6
" Pay of Pier Master & his Establishment ...
from 15th July to 19th August 1872 } 785. 3. 6
" Mr. Harris' pay ... 350. — —
Actual Cost of the four piles now in position — 6631. 10. —
Estimated Cost of same as per my
Estimate being 67½ % on Rupees
2829. the Cost of the 4 piles is 5304. 6. —
Difference ... 1327. 4. —

being about 25 per Cent in Excess
of the present Estimated rates
I may here remark that the
four piles has not been
driven down to its proper
depth, and their position also
is in clear ground

8. The present Estimated amount
for closing the gap is £. 133.374

and

and as only thirty foot piles are to be employed, this will give an average rate of Rs 3810/ three thousand eight hundred and ten per pile with superstructure of about 200 square feet. This rate is higher than those given in para 8 of this letter, but when driving to one pile having to raise and double the superstructure of one pile in the original pier, and the employment of horizontal bracings at the water line which were not included in the former rates

9. In para 5 of the Pier Committees Report it is stated that material to the value of Rs 44.292 being stored at the

the Beach will not therefore have to be paid for by Cash allotment, but as these Stores are Imperial Stores, and the Pier a Local Fund work, it is ruled under G.I. No 2394. dated 4th Oct 70/ that all such issues must be paid for in Cash, or the Equivalent book transaction, and must therefore be met from the Funds allotted to the work; therefore the whole of the material required for the work must be paid for.

10. In Conclusion I beg to remark with the Estimate

I have the honor to be
Sir
Your Most Obed Servant
J W Kemper
Colonial Supt P.W. Stores

Chepauk R
4th Nov. 1872

Administrative Department. 63 Madras. 4

Marine Office.
9th September 1872

No. 967.

From

H. D. E. Dalrymple Esqre
Master Attendant
Administrative Department
Madras.

To

The Honourable R. S. Ellis C.B.
Chief Secretary to Government.
Marine Department
Fort Saint George.

Sir

With reference to the Report of the Pier Committee sent in to Government on the 6th instant, I have the honour to make a proposal which I trust will be approved of by His Excellency the Governor in Council.

2. I beg leave respectfully to remind Government that in 1867/68, unassisted by any other department, Mr. Sadler, the Pier Master

Master, who is a first rate me-
-chanic and ship builder, under

		Rs A.P.
381	Logs Teak Timber.	25891 74
43,941	Feet Mangoe plank.	10733 134
	Iron Coal tar &c.a	5746 2 5
	Workmen	17497 8 10
	Total Rupees.	59868 10 11

my orders — expend-
-ing the materials as
per margin — restored
three parts of the Beams
and planking of the Pier for Ru-
-pees 59,868-10-11. He now un-
-dertakes to close the gap for Ru-
-pees 30,000 × and I hereby guarantee
that he will accomplish the work
under that sum.

× Note. The piles, bracings &c.a &c.a are already paid for.

3 It must be distinctly understood that this outlay of Rupees 30,000 will cover all ex-
-penses Viz.t beams, planking, extra labour &c.a &c.a - the piles, bracings &c.a now in store to be delivered by Mr.a Harris of the Department of Public Works, when required, at the inner end of the Pier.

4 I would further request that the general supervision of the work be entrusted to Colo-
-nel

-nel Goddard R.E. and myself.

5. We have now one tier of 4 piles down and Beam laid Spars, staging &c.a prepared, and we are ready to go on with the work at a few hours notice.

6. As a great saving to Government will thus be effected, I earnestly hope that sanction may without loss of time be accorded to this proposal.

7. I have another scheme for permanently protecting the Pier in the line of surf where it is most liable to injury, and which I shall shortly lay before Government.

I have the honour to be
Sir
Your most obedient Serv.t

H. D. S. Dalrymple
Master Attendant
Administrative Departt.

Proceedings of the Madras Government

Rec'd of the Master Attendant Chief Secretary to Govt. Marine Dept. Fort St. George

From the Members of the Pier Committee

Dated 9th Sept 1872
Rec'd 11th " "
No. 113

From the Chairman of Committee
From the Superintending Engineer & Do

Fort St. George

Dated 9th Sept 1872
Rec'd 11th " "
No. 114

From the Chairman of Committee
From the Superintending Engineer & Do

Fort St. George

appointed by G.O. dated 13th Aug. to report on the best means of restoring the Madras Pier and examining into further safety, have, under date the 6th September, submitted the third annexed report, and estimates prepared by the Public Works Department of the probable cost of effecting the objects in view according to

P. Mar. Sept 1872 No. 67

P. Mar. Sept 1872 No. 2

From Mr. Master Attendant

To The Chief Secretary to Government Marine Department Fort St. George

Dated 9th Sept 1872
Rec'd 11th " "
No. 113

No. 325

Recommends that the work of closing the gap of the Pier be entrusted to Mr. Saddler the Pier Master who undertakes to do it for Rs. 30000.

No. 2995 - 16 Oct 1872

P. Mar. Sept 1872 No. 6

From No. 4487

The Master Attendant

Administrative Department

To

The Chief Secretary to Government

Marine Department

Fort St. George

Dated 9th Sept 1872
Rec'd 11th " "
No. 113

No. 4967

Recommends that the work of closing the gap of the Pier be entrusted to Mr. Saddler the Pier Master who undertakes to do it for Rs. 30000.

No. 3185

12-5.

design accompanying
their report viz:-

1. For closing the present gap.

Piles and other materials:	
already available (viz Braces, Bolts and nails)	32,744-13-7
Other Iron materials	21,410-13-11
Timber superstructure	16,647-0-9
Cart hire	330-0-0
Cost of erection	26,566-6-8
Contingencies	26,674-13-0
	1,33,374-0-11
Deduct available materials	32,744-13-7
Net money outlay.	Rs. 1,00,629-3-4

2. For future protection of the work

Piles and screws available	Rs 11,546-11-6
Other materials	4,893-4-10
Cart hire	61-5-8
Cost of erection	8,250-11-0
Contingencies	6,188-0-3
	30,940-1-3
Deduct available materials	11,546 11-6
Net money outlay.	Rs 19,393-5-9

3. Strengthening the Pier Head.

Materials	Rs 20,788-13-2
Cart hire	70-0-0
Cost of erection	10,429-6-7
Contingencies	1,822-1-0
Net outlay proposed	39,110-4-9

The Committee propose to restore the Pier in its original line, and to its original width; and the space to be worked over will be, in round numbers, 180 ft in length by 40 in breadth. In the restoration, groups of 4 piles each will be needed minus 1 inner pile

already standing: making in all
35 piles in all, at an
average distance of 30
feet from row to row
or double the distance
apart in the original
structure. The cost of
erection and contingencies
is therefore put down in
estimate No 1 at the rate
of Rs 129 per pile or Rs
4828 per row of 4 piles.

The Committee were
not prepared to alter
the amounts of the estimates
which they forwarded
but could not bring
themselves to the belief
that more than one
third of the sums entered
in

in them for cost of erec-
tion and contingencies
need necessarily be
incurred, and stated
that they had actually
driven one of the nine
rows of piles at a cost
of Rs 12 42. 7-6 a sum
which is increased by
the Master Attendant
to Rs 1616-10-6 and by
the Workshop Super-
intendent to Rs
2667-6-6 excluding the
pay of the Pier estab-
lishment. The entire
cost of the original
work was at the rate
of Rs 2264 per pile,

a complete. That of the
repairs carried out in
1868-69 and 1869-70 at
the rate of Rs 27.94 per
pile, complete. That
involved by the amount
of estimate No 1
would be Rs 3810.

Making every
allowance for the diffi-
-culty of working over
the original line of
pier His Excellency
the Governor in Council
cannot but think that
the rate which obtained
in 1868/70 may with
safety be adhered to
and the total cost of
restoration of the Pier

set

set down at 35 X 2800 = Rs 98,000
out of which deducting 71,132-13-9
for Materials & Carriage Rs 27,267-2-3
would represent the pro-
-bable cost of labour and
contingencies. It will be
considered in the Finan-
-cial Department how
provision shall be
made for such a sum
leaving Rs 32,944-13-9, avai-
-lable for materials in
hand.

Nos 2 and 3 will be
amended by adoption
of a rate of 30 per cent
for labour and contin-
-gencies on the former
and half that per
centage for the latter.

which involves no screening operations; reducing the amount of the former to Rs 21,450, of which less than Rs 10,000 will be cash outlay, and of the latter to Rs 24,000 in round numbers. But their execution will be deferred till after the restoration of the Pier shall have been successfully completed. It will be carried out by the Presidency District Engineer, all his own resources and those of the Marine Department being made

made available to expe-
-rate in the work and
bring it as speedily
and economically as
possible to a conclu-
-sion.

The members of the
Chamber of Commerce
who have addressed the
Govt. on this subject
through their Vice
Chairman will per-
-ceive that it has not
been the Executive
but the Financial
aspect of the work that
has led to some delay
in undertaking it.

Rec 2 Letters 19/12/72
to 20 Nov 72 D. 23rd

Rl 3272, 5450, 5.6.1; 4457 A,
+ 5229 78

Govt. of {1872} Madras.

PUBLIC WORKS.

To District Engr
Trichinopoly

Dated

Rcvd. Encl. 5

G. O. 16th Dec 1872, No. 2975.

Nos. 317 & 321

Madras Pier

Passing orders on papers connected with the restoration of the Madras Pier.

To Govt Prof. Engr, Madras
" Marine Depts
" Master Attendt
" Chamber of Commerce
" [illegible]
" Pilot Committee
" Controller
" Accountant Genl
" Dept of Public Works
Rd 20th Dec 1872
Rd 23rd