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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W. DEPARTMENT

G.O. No. / B.P. No.	837 W	Press. / Mis.
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1/837

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following despatch from the Right Hon'ble the EARL OF KIMBERLEY, Her Majesty's Secretary of State for India, to His Excellency the Right Hon'ble the Governor in Council, Fort St. George, dated India Office, London, 4th March 1886, No. 1 (Public Works):—

Dated 2nd February 1886.

I forward, herewith, for your Excellency's information, copy of a report by Mr. Parkes on the progress made in the restoration of the Madras Harbour for the quarter ending 31st December 1885.

ENCLOSURE.

REPORT by W. PARKES, Esq., on the progress of the Madras Harbour, for the quarter ending 31st December 1885, dated 23, Abingdon Street, 2nd February 1886.

Though work has been carried on during the past quarter as actively as possible, there is little material for report, and nothing has been added to the breakwater works to make any show above water.

2. The weather of November and December is always unfavorable, and there have been more rain and more constantly rough seas than usual on this occasion. Nevertheless 17,098 tons of rubble stone have been deposited in the line of the north pier and 3,947 in that of the south pier.

3. The total quantity deposited at the north pier is now 94,230 tons, which is about one-half of the whole quantity required, and at the south pier 40,056 tons, or rather less than one-fourth of the whole quantity. From this it will be seen that substantial progress has really been made, although it does not appear above water.

4. 320 concrete blocks were made during the quarter, which added to the 1,488 in stock on the 30th September makes a total of 1,808. The total number required is about 14,000, or 8 times the quantity on hand, but at present the number is limited by the capacity of the block ground; as this is cleared the vacant places will be filled up by new blocks. Up to this time only 15 blocks have been removed. These were placed as a commencement of the north pier wave-breaker near the shore end.

5. In my last report I mentioned (paragraph 2) that one of the Titans was at the date of the then last received advices nearly ready for work. It was actually completed on the 4th November, but by an unfortunate accident during an unauthorised trial of the machinery before it was properly secured and blocked up, and during the absence of Mr. Thorowgood and Mr. Lowe, the head foreman, it was overbalanced, the projecting end was brought to the ground and the frame-work somewhat damaged. The damage was repaired in a few days, and a very satisfactory trial of its stability was subsequently made. But the necessary repairs caused some delay, not only to this machine itself, but also to the other two, from which it was necessary to withdraw the workmen who were erecting them. Owing to this delay it was not till during a short interval of favorable weather in December that the 15 blocks mentioned above in paragraph 4 were deposited in the wave-breaker. The deposit of these blocks, however, was the first operation of the Titan in its transverse position shown by diagram B in the lithographed plan accompanying my last report, and was quite successful.

6. The second Titan was, by the last reports, nearly completed, and the wave-breaker crane in a forward state. I hope both will do some good work in the current quarter.

7. I am not yet in a position to submit a definite comparison of the actual cost of the work with the estimate, but from a report made by Mr. Thorowgood to the Government of Madras three months ago it appears that up to that date the cost under all heads was considerably under the estimated rates. But as the work proceeds, and new contingent expenses are charged to it, the present margin will no doubt be somewhat reduced. The question of a higher rate for haulage of stone by the South Indian Railway Company is not yet decided. According to the present estimate the total amount payable to the Railway Company for haulages is about three lakhs of rupees and the several items which go to make up this amount will have to be increased if an extra rate be allowed. This will necessitate an amended estimate. The present estimate was based on the rate previously paid, half-an-anna per ton per mile.

8. I have not thought it necessary to submit a plan with this report as there is no new work to show and the changes of the coast line are in a transition state.

ORDER—dated 26th March 1886, No. 837 W., Public Works.

Recorded.

(True Extract.)

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

To the Superintendent, Madras Harbour Works.
" Marine Department.

Exd. E. Fernandez.
Spare Copies

2/837

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1886} Madras.

PUBLIC WORKS.

Dated March, 26th.

Recd. *Encl.*

G.O., 26th March 1886, No. 837 W.

MARCH.

Madras Harbour Works

Despatch from the Secretary of State for India forwarding copy of a report by Mr. Parkes on the progress made in the restoration of the — for quarter ending 31st December 1885, recorded.

3/837

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from F. N. THOROWGOOD, Esq., M. INST., C.E., Superintendent, Madras Harbour Works, to the Secretary to Government, Public Works Department, dated Madras, 5th March 1886, No. 56 W.:—

I have the honor to submit, herewith, a plan with the report of progress on these works during the past month of February. Again I regret to state that in some points of the work the progress has not been what I had hoped for, but the cause of this is beyond my control.

2. *North pier superstructure.*—I fully believed that in February the work of building the new superstructure would commence, but unfortunately, on the 23rd February, the Titan crane was disabled by the breaking of a wheel, and this damage is not yet repaired. Such accidents unfortunately will always happen with new machines, and the only precaution to be taken is to have duplicates of parts that are most liable to break.

3. *North pier foreshore and base.*—I am happy to be able to report good progress in the base and foreshore at the north pier. The divers have been hard at work, blowing up concrete blocks with dynamite, and have cleared away in February no less than 93, representing 2,511 tons of rubble deposited in the base. In addition to this, there have been 7,732 tons of rubble tipped by boats, and 1,333 tons of large boulders dropped in to form the heart of the wave-breaker, making a total of 11,576 tons, the best month's work yet achieved.

4. *Wave-breaker.*—At the extreme end of the north pier, the wave-breaker has been completed for a length of 190 feet at the site of the abutment of the new work, as will be seen in red on the plan. To form this length, 198 blocks, of 30 tons each, have been deposited, the greater part of these having been placed by the Titan crane, and when that was temporarily disabled the wave-breaker crane was brought into use. The completion of this length of wave-breaker is one great point gained, as now the Titan crane can get to its legitimate work of building the break-water itself.

5. *Wave-breaker crane.*—The large wave-breaker crane has now been thoroughly tested for stability, and the results proving highly satisfactory, the huge machine was travelled out on February 22nd from the spot where it was erected to the middle of the north pier. A locomotive engine drew it without difficulty. This machine has been working since February 23rd, and although there have been many unexpected and vexatious difficulties in the way, I have no hesitation in pronouncing it to be a most magnificent piece of machinery, which will, with some slight alterations, do excellent work.

6. *Difficulties at present with working cranes.*—I beg to be allowed to explain in some detail one of the difficulties which has delayed the working of the cranes during February, irrespective of accident. It must be remembered that, previous to the sanction of the present design for re-construction, there were some 800 concrete blocks on

stock in the yard. These blocks, for the most part, are not of the best shape for constructing a wave-breaker of random work, being 12′ wide, 9′ high, and only 4′ 6″ thick, whereas the proper blocks for this purpose, as made since April 1885, are 9′ × 9′ × 6′, or much more nearly approaching a cube in shape.

7. It is most desirable to get rid of the old discarded blocks as soon as possible so as to make room in the yards for making others of the correct shape, and with this in view I have hitherto been using the old blocks almost exclusively. But the result of this is unfortunate in one way. To drop the blocks at random into the sea, a peculiar apparatus or "claw" is necessary so as to dispense with divers in releasing the block, and of these claws only two pairs exist on the works, which are ample after this present stage of the work is past. But during the time that the old and awkwardly-shaped blocks remain, it becomes necessary to use the second pair of claws to load these blocks on to the trucks. The two pairs of claws therefore are now necessary for working one crane, whereas when the old stock of blocks is exhausted, one pair will be available at the south pier.

8. And this is really the reason why at present I am unable to work more than one crane at the wave-breaker. As I have said before, the difficulty will not be of long duration, but one it was impossible to foresee, because until I had made many experiments with these claws here in Madras, I could not tell for certain which was the best way to seize a block so as to avoid the chance of the concrete chipping away from the points of the claws, and I now find, after very numerous experiments, that, in order to drop one of the old section blocks from the claws, it is necessary that it should have been loaded on the truck with claws also.

9. *South pier works.*—From the above rather lengthy explanation it will be seen that during February I have been unable to deposit blocks at the south pier in the wave-breaker as I had hoped to do. There have, however, been 4,045 tons of large boulders thrown in to form the heart of the wave-breaker, and 6,247 tons of rubble added to the base, giving a total of 10,292 tons of stone deposited in February, the best month's work yet carried out.

10. *Pallávaram quarries.*—The quarries at Pallávaram have been working satisfactorily on the whole during February, and 19,408 tons of stone were delivered at the harbour. Two new lines are now laid in, and I am trying to arrange for running five and six trains a day, but at present we cannot hit upon a time-table that suits both the South Indian Railway and the Harbour Works. There were two accidents at the quarries during the month, by which three of the people belonging to the contractor lost their lives. A cooly woman and child fell down in front of a passing train, and, in spite of all efforts to save them, they were run over and died subsequently. Another cooly woman belonging to the contractor fell into a well and was drowned. I imagine that accidents of this sort, happening to people under the contractor and not under my own charge, do not need special reports to Government.

11. *Plan.*—The plan accompanying this report will be rendered more clear with a few words of explanation. At the north pier is shown, in red, the outline of the new rubble base, and in deeper red the completed wave-breaker at the end of the standing portion. In advance of the standing portion the completed rubble foundation is shown by a red wash all over it. The positions of the cranes are likewise denoted. At the south pier the same remarks apply, with the exception of the rubble base completed.

12. *Quarterly plans and photographs.*—Next month two plans and some photographs will accompany the report, which will be to the end of the last quarter of the financial year.

13. *Estimate much needed.*—I must venture to state, now that work is being resumed in all branches and these new "wave-breakers" are actual facts, that it is extremely desirable, and indeed absolutely necessary, that the estimate for the work of re-construction be sanctioned, if only for purposes of audit, for I am still forced to keep to the original estimate for the works in which no such thing as a "wave-breaker" existed, at the same time the expenditure under this head is now over Rs. 45,000, and is steadily increasing at the rate of roughly Rs. 1,800 a-day.

Order—dated 15th March 1886, No. 683 W., Public Works.

The progress made during the month of February, though better than that made during the preceding month, cannot be considered wholly satisfactory. The several causes which have combined to render this so are fully explained by the Superintendent.

2. Paragraph 10 of the foregoing letter will be communicated to the Consulting Engineer for Railways. Accidents to contractor's coolies at the Pallávaram quarries need not be specially reported to Government.

3. With reference to paragraph 13, the Government of India will be asked when sanction to the revised estimates for the restoration of the harbour may be expected.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
„ Consulting Engineer for Railways.
„ Marine Department.

Exd. E. Fernandez.
Spare Copies

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BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1886} Madras.

PUBLIC WORKS.

Dated March, 15th.

Recd. *Encl.*

G.O., 15th Mar. 1886, No. 683 W.

MARCH.

Madras Harbour Works

Passing orders on the progress report of the — for February 1886.

5/837

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following despatch from the Right Honorable Lord RANDOLPH S. CHURCHILL, Her Majesty's Secretary of State for India, to His Excellency the Right Honorable the Governor in Council, Fort St. George, dated India Office, London, 3rd December 1885, No. 10, Public Works:—

I forward, herewith, for your Excellency's information, copy of a report * lately received from Mr. Parkes on the progress made in the restoration of the Madras harbour during the quarter ending 30th September 1885.

* Report dated 10th November 1885.

ENCLOSURE.

Madras Harbour.

REPORT of progress for the quarter ending 30th September 1885.

I have the honor to append to this report a plan showing the state of the works on the 30th September last.

2. No part of the new work as yet shows above water, as such work is dependent upon the cranes sent out from England. These, at the present date, are all at Madras, and one (a Titan) was nearly ready for work at the date of the Superintendent's last advices. He hoped to deposit a few blocks before the rough weather of the present month sets in. It will not be till January, however, that much show will be made.

3. The work actually done at the piers within the quarter is the deposit of 22,975 tons of rubble stone for the foundation of the new line of the north pier, and 3,524 at the south pier. The positions of these deposits are shown in brown on the plan. The great bulk of this is from the granite quarries of Pallávaram, from whence it is brought by the South Indian Railway, but a small quantity, 162 tons at the north pier, and 459 tons at the south pier, consists of the materials of 23 old blocks which were lying in the line of the new work, and were blasted into fragments by dynamite before the rubble was deposited. Had they been allowed to remain as blocks in masses of 27 tons their incompressibility, as compared with that of the surrounding rubble, would have caused unequal settlement in the built superstructure above them, which would have been very damaging to it.

4. Attempts have been made to lift some of these blocks and transport them to within reach of one of the cranes, by which they would be again lifted and placed in the wave-breaker, but so far these attempts have not been successful. I think the attempts were quite justifiable, for the value of a block as a block is about Rs. 140, while its value as tons of rubble is only about Rs. 54. Mr. Thorowgood calculated that if 30 blocks could be recovered the cost of the apparatus for raising them would be reimbursed, and any number in excess of that would show a clear profit.

5. But the difficulties of working the apparatus were greater than was anticipated. Even on calm days, the disturbance of the water in the immediate neighbourhood of the ruined piers was so great that it was impossible to keep the lighters on which the machinery was placed sufficiently still to lower the apparatus for gripping the block with precision, and the latter was too heavy for the divers to adjust under water. I am afraid, therefore, it will be necessary to abandon any further attempts in this direction.

6. 429 concrete blocks were made during the months of July and August, making, with the 1,059 in stock on the 30th June, a total of 1,488, a number amply sufficient to carry on work till those now being made are sufficiently matured for use. Block-making was suspended during September and the first half of October, partly because the cement which had recently arrived from England was unfit for use until it had had a few weeks' exposure to the air, and partly because the only space available for making new blocks was occupied by old ones, which it was impossible

to move in consequence of the delay in the arrival of a new boiler for the Goliath crane, about which there was some correspondence at the India Office in the early part of the present year. But both these obstacles are now removed.

7. The delay due to the temporary unfitness for use of the cement on its arrival is a difficulty which has arisen since the Suez canal route was adopted for this material. All Portland cement requires a few weeks' exposure to air after it leaves the manufactory, and this was furnished by the time occupied in the Cape route, all cement forwarded by that route having uniformly arrived in excellent condition. But the five weeks occupied in the canal route requires to be supplemented by a little further delay after its arrival. I have thought it desirable to mention this, to obviate any misapprehension arising from the fact of a supply of cement temporarily unfit for use being on hand.

8. I may further mention that the locally manufactured cement is used as far as it will go, but hitherto the rate of delivery has not exceeded one-tenth of what will be required in full work, and any attempt to increase the rate of supply is apt to result in a deterioration of quality. The great bulk of the work must continue, therefore, to depend upon the regular supply of English cement.

Changes of coast line.

9. On the plan of the harbour I have shown the high-water mark south of the harbour as it was in September 1884, March 1885, and September 1885. It will be seen that the lines at the last two dates nearly coincide, but that the line in March was (except close to the pier) from 150 to 200 feet inshore, that width having been washed away during the north-east monsoon, and been recovered during the succeeding south-west monsoon. In the plan accompanying my report on the quarter ending 31st March, I showed the lines at the corresponding period for several successive years preceding, which exhibit a fairly regular annual increment. The increments exhibited by the September lines are not nearly so regular, and in this last year, as in the case of 1881-82, there has been no advance. But it is probable that the next March line will show the usual advance.

10. Inside the harbour I have shown the lines for March and September in the current year. The line for September almost exactly coincides with that for September 1881, and in each of the three intervening years there has been the same change of line between March and September as is shown in the current year, the alternating alongshore movement of sand being in directions opposite to those which take place outside the harbour. There is no regular advance from year to year, but there are occasional temporary and unimportant advances and retirements, due apparently to the surf washing down or driving up the sand more or less.

11. On a separate plan I have shown the high-water marks at Cassimode, a mile north of the harbour, for several successive years, to indicate the progress of the annual erosion. It will be seen that for the last two years it has been at a slower rate than formerly, and it certainly now presents no ground for anticipating any serious difficulty. In the seven years from 1876 to 1883 the average rate of erosion was 60 feet per annum, in the last two years it has been 20 feet per annum, and it is probable that this rate will further diminish in future years, but at present there are not sufficient materials to justify a prediction as to what form future erosion may take.

Revenue from reclaimed and purchased lands.

12. Your letter to me of 9th October informs me that the attention of the Madras Government having been called to this matter, an explanation has been given of the arrangements made, which in the opinion of the Secretary of State sufficiently meets the circumstances of the case. I need only, therefore, express a hope that the officers of the various departments which are charged with the collection of this revenue will be instructed to make the returns in such a manner that the total amount collected may be ascertained.

Block-setting machinery.

13. I beg to submit with this report two photo-lithographs representing the Titan and wave-breaker cranes which are now in process of erection at Madras. The Titans, of which there are two, one for each pier, are similar, so far as the upper platform and machinery are concerned, to those which were formerly employed at Madras, but the design of the lower framework has been modified so as to allow the machines to be worked in a variety of positions as shown in the small diagrams. The machine is supported on three legs instead of four, and each of these four is fixed on a pivot immediately above the "bogie" or carriage in which the wheels are fixed. Thus the bogie can be turned in any direction with respect to the platform above, and the whole machine can be turned on any one of the three bogies as a centre.

14. When in the position shown on diagram A, it is capable of setting blocks in advance in precisely the same manner as the former Titans, with which the working staff are therefore familiar, but its operations are limited to a length of 30 feet forwards, and a width of 15 feet transversely.

15. When in the position shown on diagram B, it is capable of carrying a block out transversely to a distance of 22 feet from the face of the breakwater, and is thus available for depositing the wavebreaker blocks to that extent. Its work in this position, however, will be only supplementary to that of the wavebreaker crane, and it is not so convenient as the latter, for a "traverser" will be required to bring the blocks to a position in which they can be lifted by the Titan. There are, however, certain portions of the work for which the wavebreaker crane is not available, and for these the Titans are specially adapted.

16. Diagram C shows how the Titan will be worked to build the wider portions of the piers near the ends. The front bogies will be set upon rails laid in the arc of a circle of which the back bogie is the centre, and it will thus be capable of turning to a sufficient extent to command the greater width.

17. Diagram D shows another position of the Titan in which a more limited distance from the face of the wall is commanded without the necessity of using the traverser. This will be useful in special cases.

18. The wave-breaker crane shown upon the other drawing is specially intended for lifting a block off its truck; carrying it to any distance not exceeding 36 feet from the face of the wall on one side, and 24 feet on the other side, and dropping it at any required spot within those distances. It will be seen that the block is suspended by a different apparatus from that of the Titan. It is gripped by a pair of claws which are suspended by their centre; but each end of the claws is also connected with the machinery above by a chain. When these end chains are slack the grip on the block is tight; but when these are tightened and the central chain is allowed to slacken, the claws open, and the block is released. By these means the blocks will be dropped at random and allowed to take their own position as they may happen to fall until a sufficient mound has been formed. By means of the overhang on the harbour side the crane will be available for landing heavy articles of cargo for the public and placing them on railway trucks.

19. When the Titan is used for wave-breaker work similar claws will be used for suspending the blocks, and the releasing will be accomplished in the same manner but with some necessary modification of detail.

20. It will be observed that there is only one wave-breaker crane, though there are two Titans. The reason of this is that there is much less work to do at the south pier than at the north, and it is expected that the one Titan will be able to do the building and the wave-breaker depositing, so far as the latter is within its reach, in the same time as the two machines can do the larger amount of work at the north pier. When the north pier is finished the wave-breaker crane may be transferred to the south pier for the necessary widening.

Cost of the works.

21. I have not received as yet the statement of expenditure to the 30th September, but previous statements show that the work is so far being executed at rates rather under those of the estimate. The principal expenditure, however, has been on rubble stone from Pallávaram, for the transport of which by the South Indian Railway the old price of six pies per ton per mile has been paid. The question of a higher rate is still under consideration. Any statement I might now submit, therefore, would require correction if a higher rate be decided on, and the state of the works at present is such that no fair comparison of estimated and actual cost could be presented. I propose, therefore, to defer presenting these statements in the form I previously adopted till the work is rather further advanced.

10th November 1885.

ORDER—dated 7th January 1886, No. 59 W., Public Works.

Recorded.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintendent, Madras Harbour Works.
" Consulting Engineer for Railways.
" Marine Department.
" Revenue do.

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1886} Madras.

PUBLIC WORKS.

Dated January, 7th.

Recd. Encl.

G.O., 7th Jan. 1886, No. 59 W.

JANUARY.

Madras Harbour Works

Despatch from the Secretary of State for India forwarding copy of Mr. Parkes' report on the progress made in the restoration of the — during the quarter ending 30th September 1885, recorded.

360.

India Office,
London, 4th March 1886.

Public Works.

No. 1

Dated 2nd February 1886.

Sir,

I forward herewith, for Your Excellency's information, copy of a report by Mr Parkes on the progress made in the restoration of the Madras Harbour for the quarter ending 31st December 1885.

I have the honor to be,
Sir,
Your most obedient,
humble Servant,
Kimberley

His Excellency
The Right Honorable,
The Governor in Council,
Fort St. George.

Madras Harbour.

Report of Progress for the quarter ending 31st December 1885.

23 Abingdon Street,
2nd February 1886.

Sir,

Though work has been carried on during the past quarter as actively as possible there is little material for report, and nothing has been added to the Breakwater works to make any shew above water.

2 The weather of November and December is always unfavourable, and there have been more rain and more constantly rough seas than usual on this occasion. Nevertheless 17,098 tons of rubble stone have been deposited in the line of the North Pier and 3947 in that of the South Pier.

3 The total quantity deposited at the North Pier is now 914,230 tons which is about one half of the whole quantity required, and at the South Pier 40,056 tons or rather less than one fourth of the whole quantity. From this it will be seen that substantial progress has really been made, although it does not appear above water.

4 320 concrete blocks were made during the quarter, which added to the 1188 in stock on the 31st September makes a total of 1508. The total number required is about 14,000, or 8 times the quantity on hand, but at present the number is limited by the capacity of the block ground. As this is

The Under Secretary of State
for India

is cleared the vacant places will be filled up by new blocks. up to this time only 15 blocks have been removed. These were placed as a commencement of the North Pier wavebreaker near the shore end.

5 In my last report I mentioned (para. 7) that one of the Titans was at the date of the then last received advices nearly ready for work. It was actually completed on the 4th November, but by an unfortunate accident during an unauthorised trial of the machinery before it was properly secured and blocked up, and during the absence of Mr. Hotpowgood and Mr. Lowe, the head foreman, it was overbalanced, the projecting end was brought to the ground and the framework somewhat damaged. The damage was repaired in a few days, and a very satisfactory trial of its stability was subsequently made. But the necessary repairs caused some delay, not only to this machine itself, but also to the other two, from which it was necessary to withdraw the workmen who were erecting them. Owing to this delay it was not till during a short interval of favorable weather in December that the 15 blocks mentioned above in para. 4 were deposited in the wavebreaker. The deposit of these blocks, however, was the first opetation of the Titan in its transverse position shewn by diagram B in the lithographed plan accompanying my last report, and was quite successful.

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7 I am not yet in a position to submit

a

a definite comparison of the actual cost of the work with the estimate, but from a report made by Mr Thorowgood to the Government of Madras three months ago it appears that up to that date the cost under all heads was considerably under the estimated rates. But as the work proceeds, and new contingent expenses are charged to it, the present margin will no doubt be somewhat reduced. The question of a higher rate for haulage of stone by the South Indian Railway Company is not yet decided. According to the present estimate the total amount payable to the Railway Company for haulages is about 3 lakhs of rupees and the several items which go to make up this amount will have to be increased if an extra rate be allowed. This will necessitate an amended estimate. The present estimate was based on the rate previously paid, ½ an anna per ton per mile.

8 I have not thought it necessary to submit a plan with this Report as there is no new work to shew and the changes of the coast line are in a transition state.

I have &c,

(Sd) W. Parkes.

№ 6

Copy Reported by Mr. Parkes
dated 2nd. February 1886

Pol. Dept
2357/86

Referred to in Public Works Letter
to Madras № 1, dated 4th March 86

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Secretary to Govt St George

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Supt M.A.W.

Marine Supt
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With order

Recd 26th March/86

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Govt. of 1886 Madras.

PUBLIC WORKS.

Rec'd 31-3-86
Ans 3-4-86

Read Encl.

G.O. 26th March 1886. No. 837 W.

Mr A. Wood Esq.

Despatch from the Secretary to the Government of India forwarding copy of a report by Mr Parkes on the progress made in the restoration of the Conjeeveram Pagoda 23rd Dec 1885.

Recorded.

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