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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P. W. DEPARTMENT

G.O. No. / B.P. No.	Press. / Mis.
926 & 927	

Dated 12 . 4 — . 1880 197—

V . S . M

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

12th April 1880, No. 926 W.

Buildings and Roads.
Civil Works.

Read the following paper:—

No. 30. Despatch from the Right Honorable the Secretary of State for India.

Public Works, No. 3.

INDIA OFFICE, LONDON, 11th March 1880.

MY LORD DUKE,—Herewith is forwarded for your Grace's information copy of a report which has been furnished to me by Mr. Parkes, C.E., on the progress made on the Madras Harbour Works during the quarter ended 31st December 1879.

Dated 10th February 1880.

I have, &c.,
(Signed) CRANBROOK.

His Excellency the Most Noble
The Governor in Council, Fort St. George.

From W. PARKES, Esq., C.E., to the Under Secretary of State for India, dated London, 10th February 1880.

Madras Harbour.—Report of progress in the quarter ending 31st December 1879.

I HAVE the honor to submit herewith a plan showing the state of the Harbour Works on the 31st December last.

2. Since the 30th September the north pier had advanced 170 feet, and the south pier 121 feet; a slow rate of progress compared with the 496 and 263 feet reported for the previous quarter. The reason for the slow progress however is a very legitimate one, viz., an almost constant heavy sea during the months of November and December. The south pier had also been retarded during the month of October by the want of blocks, caused by the delays in the delivery of cement which had been previously reported to you. The stormy weather also prevented much progress being made in the deposit of rubble base.

3. It is satisfactory to be able to state that these causes of delay are now at an end. In the month of January the north pier advanced 108 feet, and the south pier 181 feet. The north pier, as will be seen from the plan, is now well advanced into the curve.

4. Preparatory works on shore were actively prosecuted during the quarter. 1,091 concrete blocks were made, and on the 31st December 1,084, enough for 650 lineal feet of pier were in stock. English Portland cement is now being rapidly delivered, but I regret to say that the supply of locally made cement has been latterly very irregular.

5. Some additions have been made to the lines of railway, which are shown in red on the plan. The curve from the beach line towards the north pier, though involving a reversing movement, is rather more convenient for communication with the block ground than the continuous but sharper curve round Clive's Battery. The new line inside Clive's Battery and continued along the beach to the northward is for the conveyance of stone from the South

Indian Railway to the revetment and other protective works of the north beach. This stone is rather better in quality for the purpose than the laterite from the Madras Railway. I may mention that these additional railways are made with materials already in stock and involve no extra charge beyond the trifling cost of formation.

6. The intercepting sewer has, I am sorry to say, made no progress during the quarter, as some points in connection with it are still under consideration of the Government.

7. The seas which prevailed during the last two months of the year are represented by Mr. Thorowgood to have been as heavy as any he has seen at Madras. There appear to have been some rather unusual meteorological features which are deserving of further study, for which purpose I have requested to be furnished with a copy of the records of the Madras Observatory. As far as the permanent works are concerned, however, the result has been very satisfactory, no effect having been produced beyond a slight settlement, and consequent consolidation of the portions built since the last heavy seas in May. The old portions of the work scarcely settled at all. The whole of the work had been built rather higher than shown on the original design, and the settlement has in no case as yet brought down the top to the originally designed level, 5 feet above mean sea. The immunity from damage is shown not only in those parts of the work which are founded on clean rubble at the full depth of 22 feet below mean sea level, but also in those which having been originally founded on mixed rubble and sand sunk to a solid bearing under the first heavy seas to which they were exposed. In those parts still nearer the shore which having shallower foundations were protected by foreshores of rubble outside the foot of the wall, these foreshores show no change.

8. But though the Harbour Works themselves sustained no damage there was a flattening down of a portion of the revetment which had been formed for the protection of the shore north of the harbour, and it unfortunately happened that the greatest effect was produced at a spot where private property of some value, belonging to Messrs. Shand and Company, and the Honorable Mr. Coleman, approach rather near to the shore line. A length of 250 feet of their boundary walls was undermined and fell. This was unfortunate, not only as causing some temporary private inconvenience, but also as being calculated to give ground for unfavorable local criticism. In itself, however, the circumstance was of little importance, the washing down of the revetment was what was calculated on as the best mode of obtaining a solid foundation for a more substantial structure, and with regard to the invasion of private property by the sea, it appears to have been of a kind to which the whole of the alongshore properties are from time to time liable. This view is supported by the fact that the shore was considerably eroded beyond the limits of our protective works northward by the heavy northerly seas of the middle of November, but was restored almost to its original line by the more moderate seas from the same quarter before the end of the month. The position of the damage is not shown on the plan. It is about half a mile north of the north pier.

9. The revetment was restored to its original line before the end of December. The particulars sent me do not give the actual cost of restoration, but it was effected by the deposit of the required quantity of stone out of a total of 2,462 tons charged to the head of "Protective Works" during the months of November and December, the cost of which would be under Rs. 5,000. The revetment is now stronger than it was before, though I am not prepared to say that it may not be again flattened down before a permanent sea face is formed.

10. The total amount expended in these protective works up to the end of the year is about 56,600 rupees; of which 36,600 were expended in the year 1879. The work cannot be said to be completed as it is one which must be adapted to future requirements indicated by the action of the sea itself. I think it will be found however that the great bulk of the work has been already done. It is the heaviest charge against the "10 per cent. contingencies," but is at present under 2 per cent. of the amount up to the present time expended on the works.

11. It must further be borne in mind that the same action which renders necessary this charge against the harbour funds is creating on the south of the harbour a property the value of which should be placed to the credit of those funds. The advance of sand against the south pier has up to the present time resulted in the formation of an addition of about 100 yards to the harbour frontage, which cannot fail to be before long of great value. The length will increase from year to year as the shore line advances seaward.

12. It will be seen from the plan that the shore line to the south of the harbour was cut away during the quarter. This action has probably continued into the current quarter, so that any remarks upon it may be better deferred till my next report.

13. I would now beg to call attention to the two records of depths of the whole site of the harbour, shown by red figures and blue contour lines on the plan. The former show the depths in February 1878, the latter in September 1879, both surveys being made by Messrs. Thorowgood and Beardmore. There is in existence a previous survey made in September 1876 by Lieutenant Jarrad, R.N., and Mr. P. J. Falle of the Marine Survey Department. This is a very complete survey in itself, and it is published as a Chart by the authorities at Calcutta, but it is unfortunately not comparable with the more recent surveys by reason of a discrepancy of

which the cause is as yet unexplained. Some correction of the depths is undoubtedly required, but it is uncertain whether it should be made by an equal addition to all the soundings, or by additions varying with the depths. The question might probably be decided if one of the Surveyors could personally revisit Madras, but till then no conclusions as to any possible small changes of depth can be formed by a comparison of this survey with the more recent ones.

14. The two Surveys made by Messrs. Thorowgood and Beardmore however are strictly comparable in every way, and the results of the comparison are confirmed by an intermediate one made by Mr. Beardmore in October 1878, which to avoid confusion I have not shown.

15. The survey of February 1878 (red figures) was made after the great disturbance of the bottom around the head of the north pier in the south-west monsoon of 1877. The position of the end of the pier at the end of 1877, a few weeks before the survey was made, is shown on the plan. The end of the south pier at the same date is also shown, and by comparing these with the state of the works in September last, the date of the later survey, it will be seen that in the interval both piers were advanced to such an extent that any effect upon the bottom that could be produced by them must be shown by a comparison of the surveys.

16. The comparison however fails to show any such effect beyond the influence of the great accumulation which gathered around the head of the south pier about the middle of 1878. This affected the two, three, four, and possibly to a small extent the five-fathom contours, but beyond that, with the exception of some unimportant local differences, the depths in the two surveys are practically identical.

17. Now, when it is remembered that at the earlier date the whole area of the survey was open to the free action of waves and currents, while at the later date that area was intersected by two solid piers, it seems impossible to avoid the conclusion that those waves and currents have no appreciable effect on the bottom in the greater depths.

18. It is also clear from these surveys that the reports which have been from time to time circulated by commanders of ships visiting Madras, of the reduced depths in the anchorage, and to which credence appears to have been given by some persons at a distance, are quite unfounded. These reports were always contradicted on authority at Madras, but they were carried to willing ears elsewhere, which the contradictions did not reach.

19. In my last quarterly report I submitted a comparative statement of expenditure and estimate of the portion of work completed. On the present occasion, as I have not yet received the statement of expenditure for December, and the additional length of work completed is so small, I think that a similar statement at the present time would be of little value, so I propose to defer till my next report. I may mention, however, that the large number of concrete blocks made in the quarter have cost less than my estimate, and this saving will tell in the cost of the portions of the piers now in hand. I am informed also that Mr. Thorowgood has succeeded in reducing the contract rates for the supply of rubble stone for the bases, so that I hope the cost of that department of the work will for the future be less in excess of my estimate than I had at one time feared.

No. 31. ORDER THEREON, 12th April 1880, No. 926 W.

RECORDED.

2. Copy will be forwarded to the Government of India.

(True Extract.)

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

To the Superintendent, Madras Harbour Works.
" Secretary, Harbour Works Committee.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1880} Madras.

PUBLIC WORKS.

To

THE SUPERINTENDENT, MADRAS
HARBOUR WORKS,

&c., &c., &c.

Dated April, 12*th*.

Issued

Recd. *Encl.* 1

G. O., 12th April 1880, No. 926 W.

APRIL.

Nos. 30-31.

Madras Harbour Works.—Despatch from the Secretary of State for India forwarding the Progress Report of the — for the quarter ending 31st December 1879 furnished by Mr. Parkes, C.E.

927
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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

12th April 1880, No. 927 W.

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Civil Works.

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RECORDED.

2. Copy will be forwarded to the Government of India.

(True Extract.)

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

To the Superintendent, Madras Harbour Works.
" Secretary, Harbour Works Committee.

No. 32. (DOCKET No. 927 W., dated 12th April 1880.)

FORWARDED accordingly.

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

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1880) Madras.

PUBLIC WORKS.

To

THE SECRETARY TO THE
GOVERNMENT OF INDIA.

Dated April, 12th.

Issued

Recd. *Encl.*

G. O., 12th April 1880, No. 927-W.

APRIL.
Nos. 30-32.

MADRAS HARBOUR WORKS.—Forwarding the despatch of the Secretary of State for India with the Progress Report of the — for the quarter ended 31st December 1879, furnished by Mr. Parkes.

India Office, London
11th March 1880

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I have the honor to be,
My Lord Duke,
Your Grace's most obedient
humble Servant
Salisbury

Madras Harbour

Report of Progress in the Quarter ending 31st December 1879

23 Abingdon Street
10th February 1880

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The Under Secretary of State
for India

progress being made in the deposit of rubble base -

3 - It is satisfactory to be able to state that these causes of delay are now at an end - In the month of January, the North Pier advanced 108 feet, and the South Pier 101 feet - The North Pier as will be seen from the plan is now well advanced into the curve -

4 - Preparatory works on shore were actively prosecuted during the quarter - 1091 concrete blocks were made, and on the 31st December 1054, enough for 672 lineal feet of pier were in stock - English Portland Cement is now being rapidly delivered, but I regret to say that the supply of locally made cement has been latterly very irregular -

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founded on mixed rubble and sand and to a solid bearing under the first heavy seas to which they were exposed. In those parts still nearer the shore which having shallower foundations were protected by foreshores of rubble outside the foot of the wall, these foreshores shew no change.

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9. The revetment was restored to its original line before the end of December

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as

area was intersected by two solid piers, it seems impossible to avoid the conclusion that those waves and currents have an appreciable effect on the bottom in the greater depths -

6 - It is also clear from these surveys that the reports which have been from time to time circulated by the Commanders of ships visiting Madras, of the reduced depths in the anchorage, and to which credence appears to have been given by some persons at a distance, are quite unfounded - These reports were always contradicted on authority at Madras, but they were carried to willing ears elsewhere, which the contradictions did not reach -

7 - In my last quarterly report I submitted a comparative statement of expenditure and estimate of the portion of work completed - At the present occasion, as I have not yet received the statement of expenditure for December,

December, and the additional length of work completed is so small I think that a similar statement at the present time would be of little value, so I propose to defer till my next report - I may mention however that the large number of concrete blocks made in the quarter have cost less than my estimate, and this saving will tell in the cost of the portions of the piers now in hand - I am informed also that Mr Thorowgood has succeeded in reducing the contract rates for the supply of rubble stone for the base, so that I hope the cost of that department of the work will for the future be less in excess of my estimate than I had at one time feared -

I have &c

(Sd) W Parkes

No 3

Copy Report of the Parkes
dated 10th July 1000.

P.W.D.
CAIRO
No 2380

Referred to in Public Works Letter
Madras, No 3, dated 11th March 1850

December

No 2

Public Works
11th March 1850.

The
Secretary to Govt St George
No 3

P.W.D.
CAIRO
No

Public Works
No 3

1/ 10th July 1850

Encl
No 926 dy 12 April 50.
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21-4-50

His Excellency
The Most Noble
The Governor in Council
Fort St George

Cio 2387

Govt. of (1880) Madras.

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G. O. 12 April 1880, No 926-76.

Nos. 30-31

32

Madras Harbour Works.

The Despatch forwarding the Despatch of the Secy of State for India dated the 28th Feby 1879 forwarded by Govt Public 19—4 20—4

Madras Harbour Works.

Despatch from the Secy of State for India forwarding Report of the Progress of the Works for the quarter ending 31 Decr 1879 forwarded by Govt Public Dept

30/3 30/3