(1) Number of pages 62

(2) Date of repair July. 87.

(3) Initials of the Referencer Uma

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P.W.D DEPARTMENT

G.O. No. / B.P. No.	2711.W.	Press. / Mis.
Dated	26.9.1883	198—.

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Archives — I 10,006-9 88

2711/1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers:—

From Colonel J. BEATTY, R.E., Superintending Engineer, Fourth Circle, to the Chief Engineer Public Works Department, dated Ootacamund, 26th June 1883, No. 261.

I have the honor to request instructions in regard to the head to which repairs to the sea wall at Beypore is to be charged. I have hitherto been under the impression that it had been originally constructed, and was now maintained, for the advantage of the port, in order to direct the current of the river on the bar; but the Master Attendant now* states that its maintenance is not a proper charge against Port Funds, though he admits that its original cost was borne by Port Funds.

* *Vide* copy of letter herewith sent, No. 5430, of 16th instant.

2. He thinks that the Municipality or the Railway Company should maintain it, but there is no town to protect, and the Railway officers do not consider that the sea wall affords any protection to their works.

3. Under the circumstances, I request sanction to stop all further work at the sea wall and send the Master Attendant a bill for outlay incurred to date, as its construction and repairs have hitherto been charged to the Marine Department.

4. The Executive Engineer has been authorized to pay for work done and await further orders.

ENCLOSURE.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, Madras, to the Executive Engineer, Coimbatore Division, dated 16th June 1883, No. 5430.

With reference to your letter, No. 427, dated 13th June 1883, I have the honor to state that the cost of repairs to the sea wall at Beypore is not a proper charge on Port Funds, which, under the Act No. XII of 1875, are intended for works undertaken for the benefit of vessels. The sea wall is for the protection of the town and railway premises, and the original cost of the same having been borne by the Port Funds, the Municipality or Railway, or both, should now bear their share of the expenses of the wall.

2. The papers called for are returned.

No. 515.

Submitted to the Superintending Engineer, Fourth Circle, with a request that he will be good enough to issue orders as to the funds to which the work is chargeable. As the work was an urgent one, it has been carried out, and the payment to the contractor is withheld pending sanction to the estimate.

(Signed) J. P. DAVIDSON,
Executive Engineer.

20th June 1883.

No. 1249 C., Public Works.

Referred back to the Superintending Engineer, Fourth Circle, for favor of information whether the work is the same as that referred to in G.O., No. 2705 W., dated 7th October 1882. If so, the incidence of cost has already been settled.

(By Order.)
(Signed) C. BOWEN, Major, R.E.,
Under Secy. to Govt., P.W.D.

CHEPAUK,
3rd July 1883.

From Colonel J. BEATTY, R.E., Superintending Engineer, Fourth Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 7th July 1883, No. 274.

With reference to your endorsement, No. 1249 C., of 3rd instant, I have the honor to inform you that the *sea wall* in question is not one of the railway protective works, which consist of a *revetment* and some remains of *groynes*. The sea wall connects the beach, at a point near some of the outlying railway buildings, with the small rocky islet, and its only object must be to direct the current from the river on to the bar. It was visited by you in company with Colonel Mead in January 1882, and again in February 1883 in company with Captain Taylor, Mr. Davidson and myself. There has never hither to been any question about the propriety of its being maintained by the Marine Department; it can be of no possible use to the Municipality and the Railway officials consider it useless as a protective work to their property.

No. 1320 C., Public Works.

Referred to the Master Attendant for any further remarks he may desire to offer.

(By Order.)
(Signed) C. BOWEN, Major, R.E.,
Under Secy. to Govt., P.W.D.

MADRAS,
12th July 1883.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, Madras, to the Secretary to Government, Public Works Department, dated 29th August 1883, No. 8340.

In returning the papers forwarded to me with endorsement, No. 1320 C., dated 12th July 1883, relating to the sea wall at Beypore, I have the honor to state that the only portion appertaining to the Marine Department is the causeway which was proposed to be kept in repair to throw the strength of the current on the bar with the object of deepening it, but this appears to have produced no appreciable effect. On the contrary, a sand bank has formed to the westward of the islet, showing an inclination to extend to the bar proper as shown on plan herewith sent for inspection and return.

ORDER—dated 26th September 1883, No. 2711 W., Public Works.

Under the circumstances stated, all further work on the sea wall at Beypore must be stopped as suggested by the Superintending Engineer, the expenditure incurred to date being charged to Port Funds.

(True Extract.)

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

To the Superintending Engineer, Fourth Circle.
" Examiner, Public Works Accounts.
" Master Attendant.
" Marine Department.
Exd. A. F. Goodall.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1883} Madras.

PUBLIC WORKS.

Dated September, 26th.

Recd. *Encl.*

G.O., 26th Sept. 1883, No. 2711 W.

SEPTEMBER.

Sea Wall, Beypore

All further work on the — to be stopped, the expenditure up to date being charged to Port Funds.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

26th November 1880, No. 2,722 W.

22/11/3

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 123. Endorsement of the Chief Secretary to Government, Marine Department, dated Ootacamund, 23rd June 1880, No. 1,288.

From J. H. TAYLOR, Esq., Licutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Secretary to Government, Marine Department, dated Madras, 16th June 1880, No. 4,956.

I HAVE the honor to report that an encroachment of the sea has occurred at Beypore, that a portion of the roadway near the Marine Office and Flagstaff has been washed away, and that the compound walls are threatened. The President of the District Local Fund Board proposes the construction of two groynes, 20 yards in length, opposite the site of the abrasion, and he further suggests that a moiety of the expenses should be borne by the Port Fund, as the work is equally indispensable for the safety of the flagstaff as for the preservation of the roadway. While, however, concurring with him in this view, I beg to represent that the prevention of any further encroachment at this spot, and the preservation of the coast line, would appear quite as advantageous to the Madras Railway Company's interests as to this Department, as their property abuts on to the Marine Office compound, and as will be seen by the accompanying rough sketch by the Port Officer, Calicut, is apparently in greater jeopardy than the former.

2. In these circumstances, I herewith submit an estimate and specification of the work amounting to Rs. (843) eight hundred and forty-three for sanction of His Grace the Governor in Council, and will leave it to the Government to decide whether or not the Railway Company should participate in the expenditure about to be incurred. In either case a moiety or one-third of the amount of the estimate will have to be borne by the General Port Fund.

FORWARDED to the Chief Engineer for his opinion on the groynes proposed.

(Signed) R. DAVIDSON,
Chief Secretary.

To the Chief Engineer, Public Works Department.

No. 123-A. Endorsement of the Superintending Engineer, Second Circle, dated Erode, 15th September 1880, No. 279.

From Major J. L. L. MORANT, R.E., Executive Engineer, West Coast Division, to the Superintending Engineer, Second Circle, Coimbatore, dated Calicut, 17th July 1880, No. 113.

IN reply to your endorsement No. 620 W.C, dated 28th June 1880, on memorandum No. 194, dated 25th idem, from the Chief Engineer, with its three enclosures herewith returned, regarding the encroachment of the sea at Beypore and the proposals for its prevention, I have the honor to report that, in my humble opinion, the sea encroachment has been somewhat exaggerated, and that the proposed remedies are likely to prove mischievous to a portion of the harbour and inutile in protecting the Local Fund road and compound walls, &c.

2. Groynes similar to those now estimated for and advocated by the Local Fund Engineer were constructed just at the spot where the recent encroachment has occurred a year or two years ago. The effect of these was to silt up the whole of the

shore on which the Prince of Wales' Jetty was erected, rendering it quite useless as a jetty. At the end of June 1880 one of these groynes (built last year) was washed away with the immediate effect of carrying away some of the sand around the jetty. The adjoining sketch explains.

The red figures being the breadths of sand around the jetty in May and the black figures those in June. Thus—

in *May* the breadths were 200 feet.	In *June* the breadths were 64 feet.
80 ,,	38 ,,
50 ,,	7 ,,
60 ,,	19 ,,
90 ,,	27 ,,
250 ,,	124 ,,

When the jetty was built, some four or six years ago, the water around it (where now there is dry land) was 10 feet deep.

It is thus clear (by the groyne built only last year being washed away and by the above figures and facts) that the groyne system is not only defective in the purpose it is immediately intended to serve, but that it also is injurious to the harbour in causing a portion of it to silt up.

3. I beg further to remark that the Local Fund Engineer has collected stone for the two groynes estimated for, and is, I presume, about to build them. I venture to point out that it seems to me objectionable for the Local Fund Engineer to start a work of this nature without the prior sanction of Government. It is not a question where the only safety of a local road is concerned, but also where Imperial interests are involved, and in protecting his road he is injuring a harbour.

4. The best remedy, in my humble opinion, is to drive 10 feet piles along and parallel to the road side, backed by a wall of rubble stone. This was done by a former Government Engineer near the same spot and appears to have succeeded. This plan would preserve the road and not injure the harbour.

5. The survey of this part of the harbour is ready and only requires plotting, inking in and printing.

From Major J. L. L. MORANT, R.E., Executive Engineer, West Coast Division, to the Superintending Engineer, Second Circle, dated Calicut, 31st August 1880, No. 262.

I HAVE the honor to address you with reference to your memorandum No. 758 W.C., dated the 27th July 1880, regarding the Beypore harbour beach.

2. I beg to submit, as required, a plan* and sheet of sections* of the south portion of the Beypore Harbour, showing the nature and extent of the encroachment of the sea in last May which has given rise to this correspondence.

* By banghy parcel.

3. In order that the subject may be better understood, I beg briefly to indicate what has transpired during the last ten years in connection with the Beypore Harbour.

In February 1871 Mr. George Robertson inspected the Beypore Harbour, and reported that "outside the harbour mouth and to the south of it there is a reef of laterite rocks connected with the shore by an isthmus of sand. It is very likely this reef extends underneath the sand of the bar. The reef with its isthmus acts as a groyne and confines on one side the ebb and flow through the entrance. The isthmus has often been cut through by the fishermen, and a channel made by which their boats could get out to sea in certain winds without having to pass through the surf on the bar. Whenever it is so cut a diminution in the depth of water on the bar is noticed, so Captain Gillham has very properly stopped the practice. It would be well to have the isthmus heightened, its level is so nearly that of high water that a channel can be cut in a few hours. A bad sea coming on when the channel is open would enlarge it to such an extent as seriously to injure the depth on the bar."

4. In March 1873 the Master Attendant, Madras, urged on Government the advisability of connecting the rocky islet on the south of the harbour entrance with the mainland. By this means he believed the water on the harbour bar would be deepened. The Collector of Malabar, to whom this opinion was referred, agreed, on the 21st of May 1873, with the Master Attendant's suggestion and in its probable effect on the bar. The Government of Madras, therefore, in their Marine Department Order No. 207, dated 8th August 1873, desired the Public Works Department "to prepare a plan and estimate for connecting the rocky islet at the mouth of the Beypore river with the mainland, in view to deepening the river entrance by increased scour."

5. On the 11th of April 1874 a plan, section, and an estimate of Rs. 3,740 were submitted to Government with the above object by the Inspecting Engineer for Ports and Communications. This was subjected to a criticism by the then Chief Engineer, who suggested another method of connecting the islet with the shore, to cost at first Rs. 900 and subsequently Rs. 2,500. This estimate was sanctioned in Marine Department G.O., No. 159, dated 13th May 1874, and Rs. 900 allotted for the smaller portion of the work in Public Works G.O., No. 173, dated 16th June 1874. This amount was increased to Rs. 1,600 in April 1875, and subsequently in December 1875 Rs. 1,070 more were expended, making a total of Rs. 2,670.

6. Since the construction of this so-called "sea wall" it has been three times repaired. But no records exist nor have any soundings at any time been made, to show whether it has in any way answered the purpose for which it was built, viz., "to deepen the river entrance by increased scour." While much attention and criticism were bestowed on the wall itself, nothing was done to ascertain whether the object to obtain which the work was constructed resulted therefrom. It is impossible now to decide this point, as levels should have been taken across the wall before the sea-wall was built. I now send you one estimate for putting it into thorough repair amounting to Rs. 315; and another for strengthening it by some additions as indicated in my letter No. 322, dated 24th February 1880; this latter estimate amounts to Rs. 795.

7. With regard to the encroachments by the sea, as complained of in the papers sent with memorandum No. 194, dated 25th June 1880, from the Chief Engineer, and reported on in my letter to your address No. 113, dated 17th July 1880, I have the honor to invite your inspection of the accompanying plan, on which the encroachment is shown. The sections have been made in order to exhibit the levels of the adjoining ground, so that the effects of a breach of the coast road by the sea or of a high tide might be at once apparent.

8. The cost of the proposal made in paragraph 4 of my last letter to your address on the subject will be about Rs. 3 per running foot. About 600 running feet will have to be thus protected at a cost of about Rs. 2,000. The portion to be protected is where the encroachment took place in May last between the red figures 9 and 12.

9. This letter has been delayed owing to the Survey mentioned at the conclusion of my last letter having been found to be incorrect. The Sub-Divisional Officer has been engaged in making a fresh one.

Copy of letter No. 262, dated 31st August, and No. 113, dated 17th July 1880, from the Executive Engineer, West Coast, are forwarded to the Chief Engineer with reference to his endorsement No. 194, dated 25th June 1880.

Two copies of letters from Executive Engineer.
One original letter from Master Attendant with estimate and sketch.
Two plans by banghy.

The Survey shows the extent of the encroachment, and the undersigned does not consider it advisable for anything to be done at present as most probably the sea will in a few months throw up again what it has removed.

2. Further, it is considered that the Local Fund Board should bear all expenses in protecting their road, should protection be found necessary, but they ought not to be allowed to throw out groynes further than 50 feet west of the road, as it is believed that long groynes might be disadvantageous to the harbour.

3. The sea-wall connecting the laterite reef with the mainland which was constructed in 1875 ought to be maintained, and the Superintending Engineer agrees with Major Morant that it ought to be repaired and that two additional groynes should be built, the cost of the first is estimated at Rs. 315 that of the latter at Rs. 795. He requests therefore that Rs. 1,110 may be granted for these works.

(Signed) H. R. MEAD, Major, R.E.,
Superintending Engineer, Second Circle.

No. 123-B. From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Engineer, Public Works Department, dated Madras, 15th November 1880, No. 10,106.

IN returning the correspondence and plans marginally noted, I have the honor to remark that there appears to be no immediate danger of any further erosion at Beypore, and to suggest that, as I hope to visit the Western Coast in January with you, and personally inspect the situation, the proposals of Major Morant could then be considered.

Letter from the Superintending Engineer, Second Circle, No. 279, dated 15th September 1880.
Plan and sheet Sections of Beypore Harbour.

2. I imagine that, owing to a prevalence of northerly winds, there has been a scour from the groynes southward, at the same time as the monsoon has been comparatively scant there has been no scour from the river to carry away the sand accumulated in the vicinity of the jetty.

3. I have noted in blacklead pencil the line of coast, as nearly as I can remember, as it was in 1876.

4. I regret to say no systematic record of soundings on the bar has been made, but I have instructed the Port Officer of Calicut to take soundings at intervals of a month during the fine weather season.

No. 124. ORDER THEREON, 26th November 1880, No. 2,722 W.

THE measures to be adopted in connection with the encroachment of the sea at Beypore will be considered by the Chief Engineer and Master Attendant after personal inspection of the locality in January next.

2. Meanwhile the Port Officer will take careful observations at regular intervals, and report any extraordinary changes that may occur.

3. The Local Fund Board should be informed that their action must be confined to the work indicated by Major Morant as required for the protection of the road.

(True Extract.)

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

To the Chief Engineer, Public Works Department.
" Superintending Engineer, Second Circle.
" Marine Department.
" Financial Department.

Exd. S. T. Austin.
Spare Copies

27 11/3

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1880} Madras.

PUBLIC WORKS.

To

THE CHIEF ENGINEER,
PUBLIC WORKS DEPARTMENT,

&c., &c., &c.

Dated November, 26th.

Issued

Recd. *Encl.*

G. O., 26th November 1880, No. 2,723 W.

NOVEMBER.

Nos. 123-124.

Encroachment of the sea at Beypore.—Intimating that the measures to be adopted in connection with the — will be considered after the inspection of the locality by the Chief Engineer and the Master Attendant.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

23rd February 1881, No. 495 W.

Buildings and Roads.
Civil Works.

Read the following paper :—

No. 90. MEMORANDUM ON THE BEYPORE HARBOUR.

AFTER personal inspection of the Beypore Harbour with reference to G.O., 26th November 1880, No. 2,722 W., we the undersigned have arrived at the conclusion that the measures recommended by the Superintending Engineer are well considered and should be acted on.

2. Though all immediate necessity for groynes to preserve the road has now for some time disappeared, any future action on the part of the Local Fund Board should be limited as suggested by Major Mead, and there need be no objection to their making a longitudinal revetment on the sea face of the road if they wish to do so.

3. There can, in our opinion, be no doubt that the sea wall with lateral groynes connecting the laterite island on the south of the harbour with the shore should be maintained in good order, and that the funds asked for, Rs. 1,110, should be placed at the Superintending Engineer's disposal at latest from 1st April next.

4. The Chief Engineer has authorised the early collection of material with this object as the work in its present condition is very liable to be breached.

5. As this portion of the work solely concerns the harbour, the Master Attendant will not object to the available balance at credit of the Port Funds being utilised for this purpose.

(Signed) J. H. TAYLOR,
Master Attendant.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer.

3rd February 1881.

No. 91. ORDER THEREON, 23rd February 1881, No. 495 W.

THE measures proposed by the Chief Engineer, Public Works Department, and the Master Attendant, Madras, to prevent encroachment of the sea at Beypore are approved.

2. The Superintending Engineer will expedite the work, materials for which are under collection; and a sum of Rs. 1,110 will be placed, by the Financial Department, at the disposal of the Public Works Department from Port Funds early in April at latest.

3. Meanwhile a regular estimate should be submitted for formal sanction.

(True Extract.)

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

To the Superintending Engineer, Second Circle.
" Examiner of Public Works Accounts.
" Marine Department.
" Financial Department.

Exd. S. T. Austin.

Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1881] Madras

PUBLIC WORKS.

To

THE SUPERINTENDING ENGINEER,
SECOND CIRCLE,
&c., &c., &

Dated February, 23rd.

Issued

Recd. *Encl.*

G. O., 23rd February 1881, No. 495 W.

FEBRUARY.
Nos. 90-91.

Encroachment of the sea at Beypore.—The measures proposed to prevent — approved, and the Superintending Engineer directed to expedite the work and to submit a regular estimate for the same for formal sanction.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

17th March 1882, No. 708 W.

Buildings and Roads.
Civil Works.

Read the following papers :—

No. 125. No. 56.

Report to accompany Estimate for repairing the sea-wall and constructing groyne to protect the Beach at Beypore.

THE correspondence and orders in G.O., No. 2722 W., dated 26th November 1880, and No. 495 W., dated 23rd February 1881, will show that it is considered that the sea-wall built from the main land at Beypore to the rocky island at the recommendation of Mr. Robertson should be maintained.

One Sketch of Beach.
„ Survey of Sea-wall.
„ Sheet of Cross Section.
Two detailed Estimates.
„ Reports with Specifications.
One Abstract.

Last year in G.O., No. 495, dated 23rd February 1881, Rs. 1,110 were sanctioned for these repairs, the work was carried out; but in the month of June unusual weather occurred and the wall was much injured and breached in places. This action went on in subsequent months. Besides this the Local Fund road south of the wall which adjoins the railroad property was washed away. The estimate now forwarded, amounting to Rs. 5,340, provides for the thorough repair of the sea-wall at a cost of Rs. 3,470 and for the erection of a groyne of 70 feet in length ordered by the Chief Engineer on his inspection on the 19th January 1882; this groyne is intended for the protection of the sea beach to the west of the railroad property, the cost of this will be Rs. 1,870.

These works ought to be completed by the 15th May, and to enable this to be done orders have been given for the collection of materials, to meet this a grant of Rs. 2,000 will be required this year, and next official year a grant of Rs. 3,340, the balance of the estimate.

COIMBATORE,
7th February 1882.

(Signed) H. R. MEAD, Major R.E.,
Superintending Engineer, Fourth Circle.

To the Chief Engineer, Public Works Department.

No. 433 C.

FORWARDED to the Marine Department for the approval and countersignature of the Master Attendant to the estimates, &c.

17th February 1882.

(Signed) R. H. SANKEY, Col., R.E.,
Secy. to Govt., P.W.D.

No. 127.

FORWARDED to the Master Attendant.

23rd February 1882.

(Signed) R. DAVIDSON,
Chief Secretary.

No. 125-A. Endorsement of the Chief Secretary to Government, Marine Department, dated 10th March 1882, No. 74, Routine.

From J. H. TAYLOR, Esq., Lieutenant, R.N.R., Master Attendant, Administrative Department, to the Chief Secretary to Government, Marine Department, dated Madras, 7th March 1882, No. 1850.

I HAVE the honor to return the plan and estimate for repairs to Beypore, with the remark that I cannot consider that any portion of the work is debitable to Port Fund, except the trifling restoration of the sea-wall near the beach, which can, I imagine, be easily effected by removing the surplus stone from that portion of the wall nearest the rocky islet, and supplementing the remainder, if necessary, with some of the rock from the islet itself. I do not consider that the real benefit of this sea-wall has ever been established. The bar of Beypore is not, so far as I can observe, lower or the entrance more regular than it used to be. The impression on my mind, after visiting the spot with the Chief Engineer, was that a little readjustment of the materials of the wall was all that we considered necessary so far as the Port Fund was concerned. I cannot imagine any action, such as is described on the south beach opposite the Railway buildings and the camp road, being attributable to the sea-wall, which surely must have had a protective tendency. When the last erosion, which it was sought to throw the expense of on Port Funds, took place, it was on the flagstaff or north side of the wall. If therefore the wall is a source of serious detriment and expense to the neighbourhood, and cannot show any adequate advantage to the port in improving the bar, I would respectfully recommend its being removed.

FORWARDED to the Public Works Department.

(Signed) R. DAVIDSON,
Chief Secretary.

Note by the Chief Engineer.

IN last January I visited Beypore and examined the erosions which are the subject of the annexed correspondence in company with the Superintending and Executive Engineers.

The result of the instructions then given is the accompanying estimate, the items of which are—

	Rs.
(1.) Repairing the sea-wall between the shore and the rocky island ...	3,470
(2.) Constructing a groyne, 70 feet long, south of the above	1,870
Total ...	5,340

Captain Taylor, in his letter No. 1850 of the 7th instant, questions the utility of the sea-wall, cannot see the connection between its being breached and the erosions of the shore south, and considers that Port Funds should not be called on to pay for any work.

To this it must be said that the sea-wall connecting the shore with the rocky island was constructed under the advice given by Mr. Robertson after visiting the place.

Captain Taylor thinks that the real benefit of the sea-wall has never been established. I am however certainly inclined to think that as, in the *first* place, such scour as is produced by the river in monsoon floods is by its means concentrated in the bar, and as, in the *second* place, sand travelling from south to north in the usual way is thereby arrested, the sea-wall ought to do good. Whether as a fact it has done so or not I am not in a position to prove. I should certainly advise its being repaired as now estimated for till by constant observation we are in a better position to form a [illegible] it in its present state will only invite its general destruction.

Admitting that there may be some doubt on the subject, I think if the work be sanctioned the Port Funds should bear at least a moiety of the cost, viz., Rs. 1,735.

As regards the groyne south, I considered it essential, judging from the very serious erosions that had taken place along the whole length of shore, which if allowed to go on unchecked may in time cut back into, and endanger the property of, the Railway.

If the work prove successful in arresting further erosion in its immediate neighbourhood, other groynes of the same character will in all probability be needed.

I would strongly advise this being gone on with without delay.

Properly speaking these works are carried out more in the joint interest of the Local Fund Road and the Railway than in that of Provincial, but in any case they should go on, leaving, if necessary, the final incidence of the charge to be determined hereafter.

(Signed) R. H. SANKEY, Colonel, R.E.,
Chief Engineer, P.W.D.

13th March 1882.

No. 126. ORDER THEREON, 17th March 1882, No. 708 W.

THE estimate, amounting to Rs. 5,340, for repairing the sea-wall and constructing a groyne to protect the beach at Beypore, is sanctioned.

2. The Right Honorable the Governor in Council concurs in the views expressed by the Chief Engineer in his note above recorded, and accordingly directs that a moiety (Rs. 1,735) of the cost (Rs. 3,470) of repairing the sea-wall be borne by Port Funds. The balance (Rs. 3,605) of the total estimate (Rs. 5,340) will, for the present, be met from Provincial Funds, but the incidence of the cost (Rs. 1,870) of constructing the groyne will be determined hereafter.

3. The sum of Rs. 2,000 is allotted from the Provincial Reserve of 1881-82 to meet the current year's expenditure. Funds to meet expenditure in 1882-83 will be provided in April as follows :—

To be placed at the disposal of Public Works Department from Port Funds—

	Rs.
Works	1,735
Establishment at Rs. 23 per cent.	399
Tools and Plant	43
Total ...	2,177

to be allotted from the Provincial Reserve Rs. 1,605.

4. This sanction has been registered as Excluded Local No. 58 W. of 1881-82, and classified as Miscellaneous Public Improvement, Repairs.

(True Extract.)

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

To the Superintending Engineer, Fourth Circle, with eight enclosures.
" Examiner of Public Works Accounts, with duplicate Abstract Estimate.
" Financial Department.
" Marine "
" Consulting Engineer for Railways.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1882] Madras.

PUBLIC WORKS.

To

THE SUPERINTENDING ENGINEER,
FOURTH CIRCLE,
&c., &c., &c.

Dated March, 17th.

Issued.

Recd. Encl.

G.O., 17th March 1882, No. 708 W.

MARCH.

Nos. 125-126.

Beach at Beypore.—Estimate amounting to Rs. 5,340 for repairing the sea-wall and constructing a groyne to protect the — sanctioned with remarks.

27 11/9

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 63.

READ—the following paper :—

Office Note from the Examiner of Public Works Accounts, dated 14th April 1882, No. 32.

No. 64.

ORDER—dated 24th April 1882, No. 1002 W., Public Works.

In supersession of paragraph 3 of G.O., No. 708 W., dated 17th March 1882, the Government direct that the entire sum to be expended during the present official year on the improvements to the beach at Beypore, viz., Rs. 3,340, be met in the first instance from the Provincial Reserve, and that the amount to be debited to Port Funds be adjusted hereafter in the Civil Exchange Accounts, in accordance with paragraph 1970 of the Public Works Code.

2. The sanction accorded in paragraph 4 of the same G.O. is now registered as Provincial No. 7 W. of 1882-83 in cancellation of Excluded Local No. 58 W. of 1881-82.

(True Extract.)

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

To the Superintending Engineer, Fourth Circle.
" Examiner of Public Works Accounts.
" Financial Department.
" Marine "

Exd. A. F. Goodall.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1882] Madras.

PUBLIC WORKS.

To

The SUPERINTENDING ENGINEER,
FOURTH CIRCLE,
&c., &c., &c.

Dated April, 24th.

G.O. No. 1805 Dated 15th April 1882. No. 1002 W.

APRIL
Nos. 03 82

Read as Beypore—The estimate to be
Special this official year in the Imprest
Accounts of the Circle to meet in the first
instance from the Provincial Reserve Fund
Repairs, being effected hereafter

F 11/10

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read the following papers:—

No. 101. From the Consulting Engineer for Railways, dated 15th June 1882.

Note by the Deputy Consulting Engineer for Railways.

BEYPORE EROSION.

At the request of the Agent of the Madras Railway Company, I inspected on Saturday, the 9th, the protective works along the foreshore at Beypore.

2. The Railway Company's Engineers attribute the erosion now going on to the sea wall connecting the mainland with the island; principally, as I understand, because, up to the time of the construction of this wall, no erosion has been recorded.

3. As far as I have seen the records, I think there is reason to doubt whether this is the case; but setting this aside, as well as the absence of all evidence that during the last ten years any great volume of the river has passed between the island and the mainland, there stands the fact that at this moment erosion is proceeding at a part of the coast two miles or more to the south of the sea wall, and far beyond the reach of its influence or of that of the river.

4. I have myself in bygone years walked along the same spot connecting the island with the shore, and I did not gather from Mr. Wilkinson that he had at any time seen the whole or any large proportion of the river passing between the island and the mainland; but that, in his time, it was generally breached in bad weather, and a considerable body of water passed through.

At the time of my inspection, the difference of level of water north and south of the groyne was not more than a few inches, and small rollers broke through the unfinished portion in each direction.

5. The delay in commencing the groyne sanctioned in No. 708 W., dated 17th March 1882, would have proved fatal to the Railway Company's staff quarters, had not the Company's Engineers constructed a sand bag and timber groyne. This had the required effect; and now that it has been wrecked by the waves, the permanent groyne of stone will maintain the foreshore thus saved.

6. The erosion to the south of this groyne meanwhile proceeds, and I have authorised the Chief Engineer to protect the coast as far as necessary by further groynes, as there is every probability of the line itself being attacked.

7. The success of the groynes hitherto built affords good reason to conclude that the others will be effective in arresting the erosion. It is greatly to be regretted that a work sanctioned with a view to completion by the 15th May should have only recently been commenced.

The Railway Company did not own the foreshore, and the Local Fund Board declined to protect it. The Government in the Public Works Department undertook the protection, and failed to commence it.

The Railway Company have therefore been obliged to spend over 1,000 rupees in temporary work; and now have to carry out what, had they been allowed to do it, they would have finished in time to save their property.

MADRAS, 13th June 1882.

(Signed) C. J. SMITH, Lieut.-Col., R.E., Dy. Consulting Engineer for Railways.

Copy of above Note forwarded to the Chief Engineer, Public Works Department, for consideration, with advertence to Proceedings of Government, dated 17th March 1882, No. 708 W.

2. From long acquaintance with the locality, I am of opinion that the existence of the causeway connecting the rocky islets with the shore has no connection with the erosion to the south, which has threatened the Madras Railway Company's property.

3. As the Company did not own the foreshore, they were not able to take any measures for the protection of their property until the sea had actually made inroads on to it.

4. Lieutenant-Colonel Smith now states that there is every probability of the *line of Railway* being attacked by the sea. The matter is urgent, and appears to call for concerted action between the Public Works Department and the Railway Officials.

15th June 1882.

(Signed) J. SHAW-STEWART, Colonel, R.E., Consulting Engineer for Railways.

No. 101-A. From the Consulting Engineer for Railways, dated Madras, 21st June 1882.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 20th June 1882, No. 434.

I have the honor to forward, herewith, copy of a letter, No. R. 201/457, dated the 16th instant, which I have received from the Acting Chief Engineer as to the remedial measures which he considers necessary to check the encroachment of the sea along the coast at Beypore; and in submitting herewith an approximate estimate, I have the honor to recommend that immediate sanction may be accorded thereto, and that the Acting Chief Engineer be authorized to proceed with the work forthwith at an outlay of Rs. 5,540.

ENCLOSURES.

From H. R. P. CARTER, Esq., Acting Chief Engineer, to the Agent and Manager, Madras Railway Company, dated Madras, 16th June 1882, No. R. 201/457.

Encroachment of the Sea at Beypore.

After due consideration I am of opinion that we should no longer postpone the remedial measures necessary to check the encroachment of the sea along the coast at Beypore from 405/10 to 405/20 telegraph posts, as the sea is now within 200 feet of the Railway, and any sudden erosion confined to one spot would endanger its safety.

I propose to construct at once ten small groynes 50 feet long at intervals of 250 feet, commencing south of the Government groyne now in progress, and if these fail to arrest the action of the sea I intend to fill up the intervening spaces with a breast-wall so as to form one continuous line of protection; but this latter scheme will not be carried out until the action of the groynes are first ascertained.

Accordingly I enclose an approximate estimate for Rs. 5,540, and shall feel obliged if you will obtain immediate sanction for this expenditure and further authorise me to proceed with the work forthwith.

Telegram from the Consulting Engineer for Railways, to the Agent and Manager, Madras Railway Company, dated 19th June 1882.

Erosion near Beypore. Public Works Department cannot provide special staff immediately to supervise necessary works. Can Madras Railway undertake to devise and execute measures necessary for protection of their property, leaving incidence of cost to be determined hereafter? Wire reply soon.

Telegram from the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated 20th June 1882.

Beypore Erosion. Your telegram. Am forwarding to-day estimate Rs. 5,840 for sanction construct ten groynes on Beypore beach to protect our property. We can undertake work if sanction is accorded.

To the Consulting Engineer for Railways for information.

20th June 1882.

Submitted for the sanction of Government.

2. The coast line at and near Beypore was recently inspected by the Deputy Consulting Engineer, and that officer is of opinion with the Officiating Chief Engineer of the Madras Railway, that unless protection by groynes is at once supplied, the line will be endangered in the event of there being further heavy weather.

3. Under these circumstances the commencement of the work has been authorised.

Letter from the Superintending Engineer, Fourth Circle, dated 3rd July 1882, No. 251.

Notes of Inspection by the Superintending Engineer, Fourth Circle, dated 3rd July 1882, No. 252.

No. 102.

ORDER—dated 15th July 1882, No. 1805 W., Public Works.

The cost of the construction of groynes now being carried out by the Madras Railway Engineers to protect the beach at Beypore will be charged to advances by the Company pending a decision as to the incidence of the outlay, regarding which the Superintending Engineer will report further after communication with the Railway authorities and the Master Attendant, Madras.

2. As to the utility of the work, a further report will be awaited after inspection of the locality and consultation by the Consulting Engineer for Railways, the Superintending Engineer, and the Chief Engineer of the Madras Railway.

3. The execution of the work sanctioned in G.O., No. 708 W., dated 17th March 1882, has been reprehensibly delayed, and for this Major Fraser seems to be principally responsible. A copy of these orders will be communicated to that officer by the Superintending Engineer, Sixth Circle.

(True Extract.)

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

To the Superintending Engineer, Fourth Circle.
" " " Sixth Circle.
" Consulting Engineer for Railways,
" Examiner of Railway Accounts,
" Master Attendant, Madras,
" Marine Department,
} with extract paragraphs 1 and 2.

Exd. A. F. Goodall.

Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.

PUBLIC WORKS.

Dated July, 15*th*.

Recd. *Encl.*

G.O., 15th July 1882, No. 1805 W.

JULY.

Nos. 101-102.

Beach at Beypore.

Construction of groynes to protect the —.

2/11/12

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

No. 103.

READ—the following papers :—

No. 284.

NOTES of Inspection by Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, 4th Circle, for July 1882.

Malabar District, West Coast Division, Calicut Sub-division, 17*th and* 18*th July* 1882.

BEYPORE SEA ENCROACHMENT, &c.

Inspected this by order in company with the Consulting Engineer and Deputy Consulting Engineer for Railways, the Chief and District Engineers of the Madras Railroad.

The sea was calm. The present state is shown on the tracing that accompanies this. (To be returned ; there is a copy in the Chief Engineer's office forwarded with notes dated 26th June.)

The yellow and green dotted lines on the plan show the line of beach ; on the 8th July in yellow and the previous work in green.

There has been but little alteration since ; the accretion at the site of 6th, 7th and 8th groynes has increased, and there has been further erosion below the site of the 10th groyne.

The sea wall repairs are nearly completed and there is a decided shoaling and improvement in the line of breach between it and the Government groyne, but no decided accretion has formed.

The new Government groyne has been lengthened about 30 feet, total length about 120 feet ; it is strong and good.

There has been considerable erosion in the beach, near the root of the groyne and south of it ; but the Railroad Engineers have pitched the slope near it and placed on the sand between it and their No. 1 groyne a line of stone, say, 12 feet by 2 feet deep, (this has no foundation), their No. 1 groyne is about 25 feet long with revetment on each side at root. No. 2 groyne is about 20 feet long with similar short revetment on each side of root.

No. 3 groyne was partly done, but the rough weather cut it off in rear and destroyed it ; not a stone of it is to be seen.

No. 4 groyne similar to No. 3, but some of the stone is to be seen in the sand which is at the groyne site but little above L.W.L.

Nothing further has been done, the late rough weather stopped the supply of stone which was being brought down the river.

At present stone is being brought, but there appears no definite plan decided on by the Railroad Engineers as to what should be done, and the original estimate, Rs. 5,540, for ten small 50 feet groynes is abandoned, and I believe I may say that all agree that the proposal has not and will not answer.

COIMBATORE,
19th July 1882.

(Signed) H. R. MEAD, Lt.-Col., R.E.,
Superintending Engineer, Fourth Circle.

To the Chief Engineer, Public Works Department, Ootacamund.

No. 103-A.

From Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, Fourth Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 22nd July 1882, No. 292.

With reference to G.O., No. 1805 W., dated 15th July 1882, which I regret to say was not received in this office until the arrival of the afternoon post on the 17th, and therefore not seen by me until after my return from Beypore, I have the honor to report that as the Consulting Engineer for Railways considered the question regarding incidence of outlay on necessary protection of the sea beach at Beypore for the safety of the Railway was not for our discussion, this point was not entered on by us.

2. I feel it is hopeless for me to attempt to bring this matter to a satisfactory conclusion. I have however this day addressed the Consulting Engineer, and requested that he will obtain from the Railway authorities the reasons, &c., on which they base their claim (which they have indirectly made) for the Madras Government to protect their line of railroad from an encroachment of the sea.

3. With regard to communicating with the Master Attendant, I must point out that to me there are no grounds whatever for any claim being made on that department for the protection of the sea beach south of the sea wall (carried out on Mr. Robertson's recommendation) that connects the shore with the island.

The maintenance of the sea wall and the sea beach near the Beypore river mouth ought, I consider, to be a charge on the Marine Department, as those works affect the river bar, but I would submit that works south of the wall have nothing to do with it and should therefore be no charge on that department.

This being my opinion I request that I may be allowed to report hereafter without reference to the Master Attendant.

4. Referring to paragraph 2 of the Government Order under reply, in my Notes of Inspection, dated 17th and 18th July, will be found a description of the present state of the groyne work now being carried on by the Railway authorities. The original design and estimate is not being carried out and the progress made is but little. I regret that I can give no information as regards what the Railway authorities intend doing, my own impression is that no vigorous action will be undertaken until the question of incidence of outlay is decided.

5. I believe that both the Consulting Engineer and the Chief Engineer of the Railway consider the original sanctioned estimate, for 10—50 feet groynes, Rs. 5,540 as obsolete, and I believe further that they consider, after the experience of the last storm, that very considerable modifications are advisable.

They neither of them however gave me their opinion as to what they considered was the best plan to be adopted in protecting the beach, about 3,000 feet of which will probably for the safety of the railroad require protection.

No. 103-B. From the Consulting Engineer for Railways, dated Madras, 27th July 1882, No. 578.

From the Acting Chief Engineer, Madras Railway Company, to the Agent and Manager, dated Madras, 20th July 1882, No. R 201/563.

Your endorsement on Consulting Engineer's letter No. 484 of 8th current.

The groynes Nos. 1 to 4 to protect the sea beach at Beypore were commenced on 29th ultimo. During the week following there was very little work done owing to heavy weather. One boat carrying stone was swamped and the men refused to work until the weather moderated.

The greater portion of the materials of the four groynes was scattered by the action of the sea.

The sea broke so heavily on the south heel of the Government groyne on 5th current that the Resident Engineer considered it advisable to build a sea wall from the heel of the Government groyne to No. 1 groyne and this checked the erosion.

On Monday, 17th current, the works stood as follows:—

Pitching done from Government groyne to No. 1 groyne and for a short distance south of it. No. 1 groyne about 12 feet long.

No. 2 groyne recommenced with a T heel to prevent erosion.

The orders I have given with, I believe, the approval of the Consulting Engineer are:—

a. To stop No. 2 groyne for the present.

b. To go on with No. 3 groyne, changing the site slightly so as to take advantage of a projection in the beach.

c. Not to go in with No. 4 groyne.

d. To begin No. 5 groyne with a T heel to prevent erosion.

e. Not to do any work between groynes Nos. 5 and 10 as the shore is being silted up.

It may at any time be necessary to modify these orders in order to protect different points which may be threatened.

No. 516.

Forwarded for the information of the Consulting Engineer for Railways.

Madras,
21st July 1882. (Signed) J. W. MELLIS,
for Agent and Manager.

Copy of above forwarded for the information of the Chief Engineer, Public Works Department, in accordance with his request.

2. On the occasion of my visit to Beypore, (on 17th current,) it was explained by the Railway Officers that the proposals for protective works submitted by them were not intended to be rigidly adhered to, but to be modified according to experience of the conditions of the littoral currents, of changes in the coast line, &c.

3. As matter of fact, the original proposals had already been considerably modified on the date of my inspection.

4. The revised proposals, as roughly sketched above by Mr. Carter, have my concurrence, but will necessarily be liable to further modification.

5. Further reports will be forwarded to the Chief Engineer, Public Works Department, with respect to both the future progress of the works and the incidence of cost.

Madras,
27th July 1882. (Signed) J. SHAW-STEWART, Colonel, R.E.,
Consulting Engineer for Railways.

No. 103-C.

From Colonel J. BEATTY, R.E., Superintending Engineer, Sixth Circle, to the Chief Engineer, Public Works Department, dated Tanjore, 30th July 1882, No. 381 T.C.

With reference to paragraph 3 of G.O., No. 1805 W., of 15th July 1882, I have the honor to forward, for your information, a letter from Major Fraser regarding the delay in the construction of groynes to protect the beach at Beypore.

Enclosure.

From Major A. F. FRASER, R.E., Executive Engineer, Trichinopoly Division, to the Superintending Engineer, Sixth Circle, dated Trichinopoly, 26th July 1882, No. 269 S.E.

I have the honor, with reference to your No. 363 T.C., dated 22nd July 1882, and G.O., No. 1805 W., of the 15th instant, to state the following circumstances regarding the beach at Beypore, which may not be fully known.

2. As soon as the work, "repair of the sea wall and constructing one groyne," was authorized, as the time was very short, I placed a European Overseer at Beypore, under the Sub-Engineer at Calicut, to collect laterite.

3. A native contractor was under agreement to deliver stone, but as it came in slower than required I went to ascertain the cause.

4. I found that though the sea was apparently calm loaded boats could not discharge laterite, which the contractor brought down the Beypore river, at the site of the work. The stone had to be landed near the Prince's jetty in the river, and carted to the sea wall about a quarter of a mile.

5. This was a state of things which could not have been anticipated and was a source of delay. There was not much stone, I think, got by blasting on the island, as the Marine authorities were rather averse to its being cut down, and the spray was latterly strong.

6. However enough stone was got to progress with the repair of the gap in the sea wall, but more was used than calculated upon, as the sea, while the work was actually going on, cut round the shore end of the sea wall, detaching it from the beach, thus necessarily absorbing in the extension stone that would have been available for the groyne.

7. The Sub-Engineer finding time pressing and stone likely to be insufficient, recommended a tender from Mr. Gay, Contractor to the Madras Railway, who engaged to make a siding and run down the laterite to the site of the groyne by ballast train in sufficient time, but at a rate increased by a fifth.

8. I think I incurred some slight responsibility in closing with Mr. Gay, and wrote for the assistance of the Madras Railway Company in lending worn permanent-way.

9. Mr Gay constructed the siding, but just before it was commenced the sea began cutting away the beach in rapid manner, quite different from the former steady erosion, and to save the Inspector's quarters the Railway Company erected a cheap groyne, of sand bags and old sleepers, 25 yards long, which might fairly be debited to the contingencies of the "sea wall and groyne" estimate.

10. This was effective for some time, and I was under the expectation that Mr. Gay would make the stone groyne well before the setting in of the monsoon.

11. After giving over charge of the West Coast Division, on my way here, having an interest in the work, I looked at it while at the Railway Station, and found that the conditions of the problem had suddenly entirely altered.

12. The sea was eroding the coast line very rapidly, and not only breaking on it, but the water at high tide stood 1½ feet above the land, and flowed back towards the railway. The siding was ready, but Mr. Gay had not brought down a ballast train.

13. It was evident that the groyne only protected the two hundred yards, if so much, on the north side of it, and that it had no effect in preventing the alarming erosion now setting in, as the Deputy Consulting Engineer for Railways states, for two miles of the south. In fact had the stone groyne been completed it would, in my opinion, have been turned and left out at sea. The Railway were only able to protect the Inspector's quarters by quick extension of their stake groyne landwards.

14. I had thought originally that a second groyne, constructed next season, similar to the one sanctioned, would have been enough to stop erosion; but seeing the conditions entirely changed from what they were when and for some time after the estimate was prepared, I wrote a memorandum for the information of the Superintending Engineer, Fourth Circle, dated June 3rd, during the short time I was waiting for the train, stating that the action of the sea was so much more forcible than ever before that keeping it off was beyond the resources of the Public Works Department at the place, and that the co-operation of the Railway authorities was urgent. I also saw Mr. Wilkinson, C.E., the Divisional Engineer.

15. Mr. Gay said the cause of his not delivering stone was a difficulty in getting labor, as the people were in the fields transplanting rice.

No. 568 E.

Referred to Colonel Mead for remarks.

11th August 1882. (Signed) R. H. SANKEY, Col., R.E.,
Chief Engineer, P.W.D.

To the Superintending Engineer, Fourth Circle, (in original to be returned.)

No. 103-D.

From Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, Fourth Circle, to the Chief Engineer, Public Works Department, dated Camp, Vellore, 15th August 1882, No. 340.

One Endorsement, No. 568 of 11th August 1882, with one enclosure.

With reference to your endorsement No. 568 of the 11th August 1882, I have the honor to return the papers and to report that I have no remark to make on paragraphs 1 to 7 further than I have already done in my letter No. 251, dated 3rd July 1882, in which I reported, as called on, the delay in the construction of the groynes at Beypore which Major Fraser was ordered to commence by me in anticipation of sanction in February, except that Major Fraser is mistaken in paragraph 6 in stating that owing to the rough weather stone was absorbed in the extension of the sea wall that would have been available for the groyne; my notes of inspection, dated 26th June, show that even by the 3rd June the total quantity estimated for the repair of the stone wall was not collected.

2. With reference to paragraph 8, Major Fraser reported the fact to me that he could not get stone for the groyne, owing to the bad weather, except by railroad at an increased cost, and received from me at once authority to do so. I am not aware that he gave orders for the work to be begun until he received that authority.

3. Major Fraser had received orders to complete the repairs to the sea wall and the groyne by the 15th May, but it was not until the 4th May that arrangements to bring it down by rail were made and quarrying commenced. I am aware that there was rough weather from the 10th April, but I consider most of the stones for both sea-wall and groyne ought to have been collected before that date, as it was, none whatever was collected for the groyne.

4. With regard to paragraphs 11, 12 and 13, I agree with Major Fraser that the encroachments of the sea was much greater and more rapid than anticipated, but I am not aware that any one thought that the groyne would do more than protect a small portion of the coast, and although it is to be regretted that the groyne was not put up before the monsoon as intended, my own opinion is that its construction would have done but little good. Had it been completed the heavy action of the sea at the end of May and June would probably have turned it, and if this had occurred it would have done more harm than good. We should have had no stone available to extend it inwards and without protection at the root it must have failed.

No. 103-E.

From the Consulting Engineer for Railways, dated Madras, 21st August 1882, No. 187.

From the Agent and Manager, Madras Railway Company, to the Consulting Engineer for Railways, dated Madras, 5th August 1882, No. 549.

In reply to your letter No. 539 of the 26th ultimo, I have the honor to forward you a copy of a letter, dated the 29th July, No. R. 201/588, from the Acting Chief Engineer, having reference to the incidence of the cost of the protective works at Beypore.

Mr. Carter explains the steps which he took to bring to notice the encroachments of the sea from time to time, and suggests that as the Department of Public Works did not carry out the protective works with the desired promptitude, the incidence of cost of these works which we are now undertaking should be borne by that department.

I concur with Mr. Carter in this view, and trust that His Excellency the Governor in Council will be pleased to approve of the suggestion that the Public Works Department should bear the entire cost.

I also forward a tracing showing the coast line at Beypore from the year 1867 to June 1882 which you will probably find useful.

ENCLOSURES.

From H. R. P. CARTER, Esq., Acting Chief Engineer, to the Agent and Manager, Madras Railway Company, dated Madras, 27th July 1882, No. R 201/582.

Your endorsement on Consulting Engineer's letter, No. 525, of 26th current, giving cover to Proceedings of Government, dated 15th July 1882, No. 1805 W., Public Works.

I am still of opinion that the erosion at Beypore is to a great extent due to the sea wall connecting the main land with the island, and my recent inspection in company with the Consulting Engineer, the Deputy Consulting Engineer, and the Superintending Engineer, when we found an immense amount of debris which had been evidently carried down the river and deposited on the foreshore to the south of the sea wall, still further confirms me in believing that the encroachment of the sea was caused by the sea wall.

At all events the erosion of the coast during the last year has been alarmingly rapid, and the groynes proposed by me even if they proved thoroughly effective would not restore half the foreshore which was washed away during the last twelve months.

In fact the work I have put in hands is merely to afford temporary protection to the Railway property.

If it is intended either to regain the foreshore already lost or thoroughly to protect the Railway a very comprehensive scheme would be necessary either in the first instance involving groynes of great length, or in the second a sea wall along the coast having a good foundation and of considerable section.

I don't think anything on a large scale could be done for less than about half a lakh of rupees.

No. 550.

Forwarded for the information of the Consulting Engineer for Railways with reference to paragraph 2 of his letter, No. 525, of the 26th ultimo.

5th August 1882. (Signed) A. M. SAUNDERS, Agent and Manager.

From H. R. P. CARTER, Esq., Acting Chief Engineer, to the Agent and Manager, Madras Railway Company, dated Madras, 29th July 1882, No. R 201/588.

Your endorsement on Consulting Engineer's letter, No. 539, dated 26th July 1882.

So long ago as June 1880 I reported that the sea had washed away the sand opposite the Railway station at Beypore to within 9 feet of the fence. Laterite was deposited by the Department of Public Works, and the erosion of the land at this particular point was stopped.

On the 2nd June 1881 I again addressed you on the same subject and requested you to inquire what steps Government were about to take for the protection of the Railway property, and was informed that the Chief Engineer to Government stated that there was no danger of the encroachment increasing.

On 8th September I reported that the public road opposite the Inspector's bungalow had been washed away.

On 8th November I again called your attention to the fact that no action to prevent further encroachment of the sea had been taken by Government.

On 1st March 1882, finding that the Inspector's house was in danger, I ordered a temporary groyne of sand bags to be put in, and this saved the bungalow.

On 17th March Government passed certain orders for the thorough repair of the sea wall and the erection of a groyne, and I gave orders that every assistance should be given to the contractor, but I believe it was not commenced before the 1st June or thereabouts, before which date we had to work night and day to save our Inspector's house.

Had my reiterated warnings been attended to, or had the groyne been commenced in good time, much of the erosion would have been prevented, and so far as our property is concerned no further works would have been requisite. As however the want of prompt action by the Department of Public Works has now rendered extensive works necessary, I am clearly of opinion that the incidence of cost for these works as well as for the works we have already had to execute should be borne by that department.

Submitted for the consideration of Government, with advertence to their Proceedings, dated 15th July 1882, No. 1805 W.

2. The sum of Rs. 5,540, sanctioned for outlay by the Madras Railway Company on protective works at Beypore, has been expended with results which appear so far satisfactory; and the papers now submitted will, I trust, be sufficient to enable the Government to decide both as to the final incidence of that outlay and as to the responsibility for any further protective measures that may be necessary.

3. It will, I think, be admitted that the position occupied by the Madras Railway Company in connection with the recent erosion at Beypore has been unsatisfactory. The Company did not own the foreshore, which has always been understood to be the property of the State, while immediately outside their station-yard ran a public road which I believe was recently transferred to the custody of the Local Fund Board.

4. As stated by the Company's Chief Engineer he drew attention to the aggressive action of the sea at Beypore so long ago as June 1880.

The fact was at once notified to the Superintending Engineer of the Circle, with a request that the necessary steps might be taken to prevent further encroachment.

The reply, dated 2nd August 1880, was that "the Executive Engineer reports that at present nothing should be done."

5. A year later, in June 1881, the Company's Chief Engineer reported that the sea was making further encroachment, and inquired whether any measures were being taken by Government for the protection of the beach. The matter was again referred to the Superintending Engineer, who stated, in reply, dated 7th June 1881, that "if the encroachment of the sea at Beypore is similar to that that occurred last year, no notice need be taken of it."

6. In September 1881 the Company's Chief Engineer again reported upon the action of the sea at Beypore, stating that the public road had been completely washed away and that part of the station-yard had also disappeared. Copies of this report were forwarded on the 9th September both to the Superintending Engineer of the Circle and to the Local Fund Engineer of Malabar. From the Superintending Engineer no reply or acknowledgment was ever received, but on 24th November 1881 the President of the Local Fund Board stated that that body were not inclined to repair the road, as the outlay would be more than they could afford, and the result doubtful.

7. In their Proceedings, dated 17th March 1882, No. 708 W., sanction was accorded by the Government to an estimate amounting to Rs. 5,340, of which sum Rs. 2,470 provided for the thorough repair of the sea wall, or rather causeway, which connected two rocky islets with the beach, and Rs. 1,870 provided for the construction of a groyne, 70 feet in length, to the west of the Madras Railway station-yard. This expenditure was sanctioned in view to the completion of the works by the 15th May, the date named by the Superintending Engineer, but the Government are already aware that the burst of the monsoon found the groyne scarcely commenced, and that the delay would probably have proved destructive to some of the Railway Company's buildings had not their Engineers hurriedly constructed a groyne with sand bags and piles, which checked the action of the sea.

8. In the papers now laid before Government two points are specially urged by the Company's officers—

(1) That the encroachment of the sea has been due to the existence of the causeway above alluded to, connecting the rocky islets with the beach.

(2) That the failure on the part of the Public Works Department, to take effectual measures to arrest the encroachment of the sea, and the delay in constructing the groyne sanctioned in March last, have rendered necessary not only the outlay of nearly Rs. 7,000, recently incurred by the Company, but also further extensive protective works, the cost of which is roughly estimated at Rs. 50,000, and that the whole of such expenditure should therefore be borne by the Public Works Department.

9. With respect to the first point, I have already stated my opinion that the erosion of the beach cannot be properly ascribed to the existence of the causeway in question, and careful examination of the locality has confirmed that opinion.

In support of this view, it may be mentioned that, in the year 1858, the then Chief Engineer of the Madras Railway Company strongly advocated the construction of the causeway, in view to the formation of a boat harbour to the south, exactly opposite the portion of beach which has lately suffered from the action of the sea.

The proposal is recorded in the letter addressed to the Government of India on the 27th January 1859, No. 50.

10. With respect to the second point, it is for the Government to decide whether the arguments adduced by the Company's representatives are sufficient to justify the relief of the Railway budget from the very considerable outlay which will probably be required in view to the thorough protection of the station and line. It is not necessary to represent the importance of an early decision, in order that no doubt may remain as to the authority responsible for devising and executing any further protective works which may be required.

11. Whatever may be the decision arrived at, I think it is to be regretted that the Company's officials should have been met by mistaken assertions that they were wrong in foretelling the necessity for early protective measures. I also submit that it would have been more satisfactory to the Company if they had been informed from the first that the interests, neither of the Government, nor of the Local Fund Board, in the land lying between the Railway property and the sea were sufficient to justify the execution of the necessary protective works; and if they had then been placed in full possession of the foreshore, and authorised to undertake operations on their own account.

Madras, 21st August 1882. (Signed) J. SHAW-STEWART, Colonel, R.E., Cong. Engineer for Railways.

No. 633 E.

Extract paragraphs 1 to 7 of the foregoing Note by the Consulting Engineer for Railways is forwarded to the Superintending Engineer, Fourth Circle, for such explanation as he may be in a position to offer.

24th August 1882. (Signed) R. H. SANKEY, Col., R.E., Secretary to Govt., P.W.D.

To the Superintending Engineer, Fourth Circle, with extract.

Read—the following letter from H. R. P. CARTER, Esq., Acting Chief Engineer, to the Agent and Manager, Madras Railway Company, dated Madras, 8th August 1882, No. R 201/613 :—

Progress of Groynes at Beypore. Second Fortnightly Report.

I beg to forward, for the information of the Consulting Engineer, the second fortnightly report with reference to the above work as requested in the second paragraph of his letter, No. 484, of 8th ultimo, to your address.

1. The construction of groynes Nos. 3 and 5, which were specially ordered, has been finished, and they have been further protected by the additions of T-headed heels.

2. The beach wall has been carried to groyne No. 2 and greatly strengthened all along towards the Government groyne.

3. Material for the remainder of the work is being delivered in ample quantity.

No. 560.

The Consulting Engineer for Railways for information with reference to his letter No. 484, of the 8th ultimo.

Madras, 9th August 1882. (Signed) J. W. MELLIS, *for* Agent and Manager.

From H. R. P. CARTER, Esq., Acting Chief Engineer, to the Agent and Manager, Madras Railway Company, dated Madras, 15th August 1882, No. R 201-633.

In continuation of my letter, No. R 201/613, of 8th current, I beg to report that the sea wall and groynes at Beypore have been completed, and I beg to forward a tracing showing how the works have been carried out.

You will observe that the original plan has been considerably modified, as we found as we worked that this was necessary in order to use the materials in the most economical manner.

I believe that the Consulting Engineer who lately inspected the works is satisfied that the modification was advisable.

I have directed the Resident Engineer to expend the small balance available in stacking stone to throw in where necessary, as since my inspection on the 9th current the sea has washed into the compound of one of our bungalows to the south of the Inspector's bungalow, carried away some of the Government groyne and shaken some of our work.

No. 593.

The Consulting Engineer for Railways for information in continuation of my endorsement, No. 560, of the 9th instant.

Madras, 17th August 1882. (Signed) A. M. SAUNDERS, Agent and Manager.

No. 188.

Endorsement on the above.

Copies of above forwarded for the information of the Chief Engineer, Public Works Department, in continuation of the report forwarded on 27th ultimo, with endorsement No. 578.

2. Plans Nos. 859-*A* and 859-*B* are also sent herewith for inspection. The first shows the coast line at Beypore, as taken in different years between 1867 and 1882. The second shows the protective works which have been recently carried out by the Madras Railway Company.

3. Since the commencement of those protective works the action of the sea has been more favorable. There has been a deposit of sand on the beach along the entire line of erosion; but chiefly at the south end, where nearly 100 feet have been acquired.

4. It is particularly requested that these two plans may be returned when no longer required.

(Signed) J. SHAW-STEWART, Colonel, R.E., Consulting Engineer for Railways.

No. 103-F.

Read—the following letter from Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, Fourth Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 5th September 1882, No. 378 :—

I have the honor to acknowledge the receipt of extract paragraphs 1 to 7 of Note by the Consulting Engineer for Railways forwarded in your memorandum, No. 633 E., dated 24th August, for explanation.

I regret that I cannot agree with the Consulting Engineer in his statements, and have no course but to comment and add on to many of them.

2. In paragraph 4 it is stated that my attention was called to the aggressive action of the sea at Beypore in June 1880, and that my reply was that "the Executive Engineer reports that at present nothing should be done." I have to point out that although this statement is perfectly correct, the following should be added.:—

1*st*.—That the encroachment complained of was north of the sea wall and has nothing to do with the present case.

2*nd*.—A reference to G.O., No. 2722 W., dated 26th November 1880, and G.O., No. 495 W., dated 23rd February 1881, will show, I think, clearly that the Railway authorities exaggerated the danger that you and the Master Attendant approved of my action and proposals, and finally that

Government in their Order, No. 2722 W. (see paragraph 3), considered that it was for the Local Fund Board to protect their road.

3. In paragraph 5 it is stated that further action of the sea was reported (this was south of the groyne), and that on its being reported to me I only said that if the encroachment was similar to that that had formerly been reported no notice need be taken of it. This is quite correct, and I think I was justified in giving that reply. I inspected the place in July, and in my notes of inspection and in letter, No. 281, dated 15th July 1881, I reported that a portion of the road had been washed away, but I considered as I do now that it was for the Local Fund Board or the Railway to protect their own property.

4. Paragraph 6. The Consulting Engineer on the 19th September forwarded to me copies of letters from the Chief Engineer and Manager of the Railway stating that the Local Fund Road had been washed away, and that they had arranged to allow a passage through their property (namely the Inspector's compound) for two months only, and requesting him, the Consulting Engineer, to urge the proper department to expedite the carrying out of the reconstruction of the road. No remark was made on this request, except that I was informed that a copy of the letters had been sent to the Local Fund Engineer. I did not reply to this, as I had nothing to do with the road; there was no request for me to address you on the encroachment which had already been reported.

5. Paragraph 7. While regretting that the groyne sanctioned in G.O., No. 708 W., dated 19th March 1882, was not as it should have been completed by the 15th May, I have again to repeat my opinion (as stated in paragraph 4 of my letter, No. 340, dated 15th August) that had the groyne been completed by that date it would have done but little good.

On the 21st April 1882, at the request of the Consulting Engineer, a sketch showing the position of the proposed groyne was sent to him, and I am sure that neither the Consulting Engineer nor the Railway Engineers considered that this groyne could possibly protect more than a very short line of the coast.

6. I think the above show that it is only now that the Madras Railway have made a direct claim to be protected at Government expense from the action of the sea, that previous to this they contented themselves with calling attention to encroachments, and that in September 1881 they tried to force the Local Fund Board to protect them by threatening not to allow a passage through their property. When in November 1881 they were told by the President that the Board were not inclined to protect or restore the road they were content to do nothing, and did not even ask Government or any Government official for works to be undertaken at Government cost from the protection of their property; also that the fact of Government having sanctioned a groyne near their property and not carrying it out as soon as intended gives them no claim for protection at Government cost. Further, my notes of inspection forwarded to you and my letter, No. 292, dated 22nd July, show that they did not take vigorous action when matters got serious, but wished Government to undertake the work.

7. On the receipt on the 19th July of G.O., No. 1805 W., dated 15th July 1882, I requested the Consulting Engineer for Railways to obtain from the Railway authorities the reasons on which they based their claim for the Madras Government to protect their line of railroad from encroachments of the sea, but in his letter, No. 656, dated 24th August, he informs me that the views of the officers of the Madras Railway have been forwarded to you for submission to Government; as therefore they have not been sent to me I am unable, as ordered in G.O., No. 1805 W., dated 15th July, paragraph I, to report regarding the incidence of outlay on protective works further than to express my opinion that the Madras Railway have no claim whatever on the Madras Government.

8. In conclusion I would urge that this question should be decided as soon as possible. There is no necessity I believe for works to be undertaken at present, as the sea is throwing up the beach again, but it may be necessary at any time to carry out protective works and unless it is decided at whose cost these works are to be executed it is I fear hopeless to expect vigorous action.

No. 103-G.

No. 394.

Notes of Inspection by Lieutenant-Colonel H. R. MEAD, R.E., Superintending Engineer, Fourth Circle, for the month of September 1882.

Coimbatore Division, Malabar District, Calicut Taluk, 12th September.

Beypore Groynes, &c.

The state of the work undertaken by the railroad is as follows:—

A groyne about 20 yards in length thrown out on the site of their proposed groyne No. 5. This groyne has a short T at its base; from it there has been an encroachment for about 60 yards in length on the south, but south of this as far as I can judge there has been no further encroachment and things remain much as they were. North of this at site of No. 3 proposed groyne another groyne about 18 yards in length with a T at root has been put down; this has caused action and encroachment south of it for about 35 yards. For 180 yards south of the Government groyne longitudinal revetment has been put down of a section of about 12 feet × 2 feet.

Government groyne completed and standing well; the longitudinal revetment put down by the railroad has protected the south side from any further encroachment.

Sea wall work completed and standing well about 40 yards in centre; not very good; this was the portion damaged last May; it is quite safe, but will require making up next year. Both sides of the sea wall silting up at both ends, and there is accretion on the shore between the sea wall south as far as the Government groyne.

No. 104.

Order—dated 17th October 1882, No. 2705 W., Public Works.

The Right Honorable the Governor in Council has carefully considered the correspondence recorded above, in regard to liability for the cost of protective works at Beypore, and, in the absence of any definite proof that the erosion of the beach is due to other than natural causes, is of opinion that the cost of the works already carried out, as well as such future expenditure as may be necessary to protect railway property, should be borne by the Madras Railway Company.

(True Extract.)

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

To the Superintending Engineer, Fourth Circle.
" Consulting Engineer for Railways, with two plans.
" Examiner, Railway Accounts.
" Examiner, Public Works Accounts.

Exd. S. T. Austin.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1882} Madras.

PUBLIC WORKS.

Dated October, 17th.

Read. *Encl.*

G.O., 7th Oct. 1882, No. 2705 W.

OCTOBER.
Nos. 103-104.

Protective
Produetive Works at Beypore.

Deciding that the cost of the — as well as such future expenditure necessary to protect railway property should be borne by the Madras Railway Company.

Supg Engineer's office 4th Circle
Camp Cotacamund 26th June 1883

No 261

From

The Superintending Engineer
4th Circle

To,

The Chief Engineer
P.W. Department.

Sir

I have the honor to request in-
structions in regard to the head to which
repairs to the Sea wall at Beypore is to be
charged. I have hitherto been under
the impression that it had been originally
constructed, and was now maintained,
for the advantage of the port, in order
to direct the current of the river on the
bar; but the Master Attendant now states
that its maintenance is not a proper charge
against Port Funds, though he admits
that its original cost was borne by Port
Funds.

2 He thinks that the Municipality
of

Enclosures 1
152 3 w Fd 31-5-83
Taken for
Triennial Catalogue
report

x vide copy of
letter herewith
sent No 5430
of 16th inst.

or the Railway Company should maintain it; but there is no town to protect, and the Railway officers do not consider that the Sea wall affords any protection to their works.

3 Under the circumstances I request sanction to stop all further work at the Sea wall, and send the Master Attendant a bill for outlay incurred to date; as its construction and repairs have hitherto been charged to the Marine Department.

4. The Executive Engineer has been authorized to pay for work done, and await further orders

I have the honor to be
Sir
Your most obedt. Servant

L. Beatty. Lieut. R. E.
Supg. Engineer 4th Circle

27/11/19

Per Chepauk
3rd July 1883

No 1249C

Referred back to the Superintending Fourth Circle for favor of information whether the work is the same as that referred to in G.O. No 2705-W dy 7th Octr 1882 - If so the incidence of cost has already been settled (By order)

C. Unwin Major R.E
Actg Secretary to Govt
P.W. Dept

In order

From
The Supdg Engineer,
Fourth Circle.

PUBLIC WORKS DEPARTMENT
GENERAL BRANCH
4 JUL 83
P.W.D.

Dated 26th
Disp'd: 28th } June 1883.

No 261

Encl

Sea Wall at Beypore:—

Requesting instructions in regard to the head to which repairs to the — is to be charged.

Referred

Madras
Administrative Dept
Marine Office
16th June 1883.

No 5,30

From
The Master attendant,
Administrative Dept Madras.

To
The Executive Engineer
Coimbatore Division.

Sir.

With reference to your letter No 1427 dated June 18th 1883, I have the honor to state that the cost of repairs to the sea wall at Beypore is not a proper charge on Port Funds, which, under the Act No XII of 1875, are intended for works undertaken for the benefit of vessels. The sea wall is for the protection of the town and Railway premises, and the original cost of the same having been borne by the Port Funds, the Municipality or Railway or both should now bear their share of the expenses of the wall.

2. The papers called for are returned.

I have &c
Signed J. H. Taylor
Master Attendant
Administrative Dept

No. 515. Dfr 4

Submitted to the Supg Engineer 1st Circle, with a request that he will be good enough to issue orders as to the funds to which the work is chargeable. As the work was an urgent one, it has been carried out, and the payment to the contractor is withheld pending sanction to the estimate.

Signed/ J. P. Davidson
Executive Engineer

20/6/83.

True Copy
R. Beatty - Coll 186
Superintending Engineer
1st Circle
26th June/83

RECEIVED 4 JUL 83 P.W.D.

RECEIVED 13 JUL 83 P.W.D.

Supg Engineer's Office 1st Circle
No. 274 Coimbatore, 7 July 1883.

From

The Superintending Engineer
1st Circle

To

The Chief Engineer
P.W. Department.

Sir.

With reference to your endorsement
Encl
Endorsement No 12490 of 3rd inst., I have the honor
(returned) to inform you that the sea wall in question is not one of the Railway protective works, which consist of a revetment and some remains of groynes. The sea wall connects the beach, at a point near some of the outlying railway buildings, with the small Rocky Islet, and its only object must be to direct the current from the river on to the bar. It was visited by you in company with Coll Mead in

in January 1882, and again in February 1883 in company with Captain Taylor, Mr. Davidson and myself. There has never hitherto been any question about the propriety of its being maintained by the Marine Department; it can be of no possible use to the Municipality, and the Railway officials consider it useless as a protective work to their property.

I have the honor to be

Your most obedt. Servant

P. Beatty. Lieut. R.E.

Supg Engineer

1st Circle.

2711/29

p6

Madras
12th July 83

No 1320C

From

The Supt. Engineer,
Fourth Circle

Referred to the
Master Attendant
for any further re-
marks he may desire
to offer

(By order)

C. Owen
Major RE
Under Secretary to Govt
Pub Wks

Dated 7th
Desp: Do } July 1883.

Enc: 1

No 274.

Sea Wall Beypore:—

I forward that the
Sea Wall, Beypore is
not one of the Railway
Protective Works which
consist of a revetment
and some remains of
groynes.

Referred

p7

Administrative Department.

MADRAS,
Marine Office,
29th August 1883.

No. 8340

From

J. H. TAYLOR, Esq., LIEUT., R.N.R.,
Master Attendant,
Administrative Department,
Madras.

To

The Honorable Major General
R. H. Sankey R.E. C.I.E.
~~Chief~~ *Secretary to Government,*
Public Works ~~Marine~~ *Department,*
Fort Saint George.

SIR,

In returning the papers —
forwarded to me with endorsement No 1320 C,
dated July 12th 1883, relating to the sea
wall at Beypore, I have the honor to state
that the only portion appertaining to the
Marine Department is the causeway, which
was proposed to be kept in repair to throw
the strength of the current on the bar, with
the object of deepening it, but this —
appears to have produced no appreciable
effect. On the contrary a sand bank has
formed to the Westward of the inlet, showing
an inclination to extend to the bar proper

as

as shown on plan herewith sent for

inspection and return.

I have the honor to be

Sir

your most Obedt Servant

J. H. Taylor

Master Attendant

Administrative Department

D11
2/94

Go. 708 W dy 17-3-82
" 495 W dy 23-2-82
" 2722 W dy 26-11-80
" 2705 W 7.10.82
" 1805 W 15.7.82
" 1002 W 4.4.82
~~" 2722 W 26-11-80~~

(188) DEPARTMENT.

From

THE MASTER ATTENDANT,

ADMINISTRATIVE DEPARTMENT,

Madras,

To

THE ~~Chief~~ SECY. TO GOVERNMENT,

Mn. ~~Marine~~ DEPARTMENT,

Fort St. George.

No. 8340.

Dated 29 *Augt* 1883

Received

No.

Subject.

States that the only portion of the Beyporé Sea Wall that appertained to the Marine Department was the causeway; but that even that has produced no appreciable Effect.

Oct. 30-8

Marine Department

Office Note

5 2715

The Secretary

Public Works Deptt

The cost of building the sea wall is an expense "incurred for the sake of the port", and as such chargeable under Section 47, Act XII of 1875, as a charge against the Port fund account.

2 It was, however, decided in G.O 17th October 1882, No 2705 W., that all charges for protective works at Beyporé incurred up to that date should

should be borne by the Madras Railway Company.

3. It is therefore considered by Govt that expenditure incurred before the 17th October 1882 should be debited to port funds, and that incurred afterwards, to the Railway Company.

(by order)

FW

Attachment
15 September 83

This office note appears based on a misapprehension on the part of the Marine Dept. There appears to be a confusion between two quite distinct works: —

(a) - the Sea wall - or rather Causeway - connecting

It will become FW

the rocky islet with shore.

(b) - The Railway protective works, considerably to the South of the causeway.

The present correspondence relates exclusively to (a) — Whereas Pro: of 7-10-82 W. 2705 W - (quoted in support of the opinion given by Marine Dept.) relates exclusively to (b).

It may be added that the causeway (a) - not only had no connection with protection required for Railway property — but was strongly objected to by the Railway officers, as being in their opinion the cause of injury to their property.

DS
18-9-83.

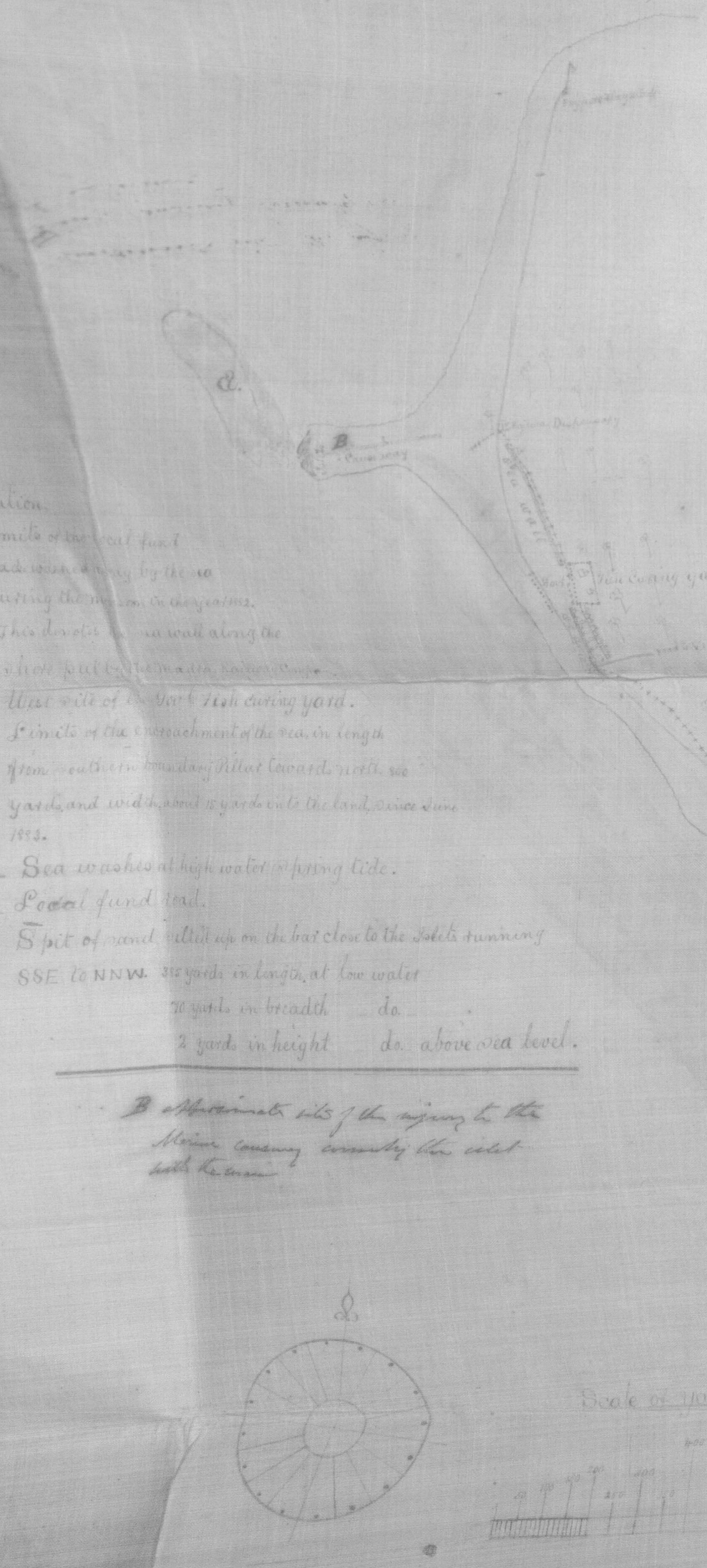
Vide Pro: of Govt.
17-10-82 - W. 2705 W.
pages 2-6-7
passages marked in
accompanying copy.
also marked passages in other Pro:

To the Chief Secretary
Marine Dept.

Beypore

Sketch of the Southern limit of the port of Beypore by P. M. Joseph.

Beypore marine office 8th August 1883.



J. W.

Office Note in the Marine Dept. No: 1766 d/ 15 Sep: 83.

2211
2784

So far as I can understand the correspondence it seems to me that the Marine Dept are mixing up two distinct works. viz:

(a) the Sea wall works for completing of the Rocky Islet, &
(b) the Railway protection works South of the Islets.

The present correspondence refers to the former, while L.C. 27050 d/ 7th Octr: 82, which is quoted in support of the Marine Dept ruling, refers exclusively to the latter.

If the Railway Company objected to pay for the latter works they will have strong

objection to bear the cost of (a) which were incurred before irrespective of the Railways.

The issue of the Marine Dept making would there doubtless give rise to controversy which the Govt could not profitably entertain.

K S

17.9.

Please return note to Marine Dept forwarded: a remark.

15-9-83

Rc 27117

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 26 Sept 83

READ the following

From the Supt Engineer Fourth Circle } (M.C. No 2618 of 26th June 83)

" Do. Do. (" " 2714 " 7th July ")

" Master Attendant Administrative Depart } (" " 8340 " 29th Augt ")

Under the circumstances stated, all further work on the sea wall must be stopped as suggested by the Supt Engineer the expenditure incurred to date being charged to Port Funds.

Dos H 9/9 1/10/83

Supt Fourth Circle
Exec P. W. Accts
Master Attendant
Marine Depart

(The Secy Marine Dept informed verbally)

7045
5757
5477

Govt. of 1883. Madras

PUBLIC WORKS.

7/7

Date

Ref

Letter n. 26 Oct 1883. No. 2711 M

Nos.

Sea wall Repairs

All further work entirely stopped & the Expenditure up to date charged to Port funds

60/-

Exhibit Report Repts.