M.R.O. 1—77,006—8-6-37.

(1) Number of pages 16

(2) Date of repair 10.1.14

(3) Initials of the Reference

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 3407 Press ~~Mis.~~

460-61

Dated 22 10 1869.

Not to be folded or roughly handled

No. 460. Read the following letter from the Officer in charge of Public Works Operations at Cochin, to the Secretary to Government, Public Works Department, dated Cochin, 27th September 1869, No. 78 :—

I HAVE the honour to enclose a sketch of the Cochin coast, showing the position of an embankment I have recently constructed to close a channel that has always existed between the Vypeen coast and the shoals in front of it.

2. This channel is described in "Sweeny's" Survey of 1852 "as highly dangerous to vessels leaving with the ebb tide, owing to the very great velocity with which the tide runs through it;" and by the Master Attendant of Cochin, in a communication from him printed with G. O., in the Public Works Department, dated the 24th March 1869, No. 1,003, "as likely to soon scour up and form a very deep channel by the terrible impetuosity with which the tide runs through it;" and he recommended that, even on the ground of economy, the Vypeen main groyne should be extended to the foreshore as soon as possible, so as to close this channel and to prevent the tide from passing through it. Major Shaw Stewart also, and his colleagues in the Commission appointed to report on the Cochin Harbour at the end of last year, appear to have attached much importance to the closing of this channel, and no doubt it was with this object that the Vypeen main groyne was the only work of the kind that was not stopped by the Order of Government, dated the 11th February 1869, No. 453.

3. On assuming charge of the works in April last, I found that the foreshore was about 200 feet from the extreme end of the main groyne, and that as the groyne progressed the channel maintained its width, by a corresponding cutting away of the foreshore in an opposite direction. The groyne was then costing at least 75 rupees a running foot, and, as its section was increasing rapidly, it would have cost no less than 20,000 rupees to extend it 200 feet in endeavouring to catch the foreshore by it. I am almost certain that the only effect of such an extension, *from one end*, would have been to move the channel so much forward, and to have turned the direction of the current right on to the coast it was intended to protect; for these reasons, as well as that I saw no very pressing necessity for the work at the time, I deferred it, and the Government in their Order, dated the 31st May 1869, No. 1,785, were pleased to approve of my having done so.

4. During the past month the upper surface of the foreshore was moved to the north of the groyne and closer to the beach, shifting the course of the channel before it on to the main land, and thereby neutralizing any good effect the groynes recently constructed might have had in protecting or reclaiming the coast line. It therefore became necessary to divert the course of the channel somehow, and although the current was deep and strong, I tried the usual means of stakes, tatties, brushwood, and (for want of clay) sand-bags, to stop it, and I am glad to be able to report that the means adopted have been very successful. The width of the channel at its narrowest point was at low water 150 feet, and the depth eleven feet, increasing at high water to 175 feet wide and fourteen feet deep, with a current during the "ebb" of four and a half feet a second, or about three miles an hour, and during the "flow" of three feet a second, or about two miles an hour. The manner of closing

the channel by the means adopted is so well known that it requires no description; there was some difficulty in mastering the currents, but once this was done the sea itself, with very little assistance, formed the embankment to such an extent that in the course of a few days, if the stakes and tatties were not still visible, it would be difficult to discover the artificial part of it.

5. I anticipate very favourable results from the closing of this channel; indeed the good effect of the embankment is already very apparent, not only by the gradual extension of the beach to the north of it, but by the filling up of the deep channel in front of the Vypeen main groyne. It has cost in round numbers 600 rupees, in addition to which I request sanction for a further expenditure of any sum that may be required up to 1,000 rupees, to extend it seawards whenever a favourable opportunity may offer by the shifting of the shoals, and to keep the tidal current in its new course; this amount can be met by transfer from the funds sanctioned for wooden groynes in G. O., dated the 31st of May 1869, two of these groynes being now unnecessary.

6. I take this opportunity to submit a report from the Tahsildar, in reference to a statement made by certain residents in Cochin in a communication recently addressed by them to Government, to the effect "that a considerable portion of Vypeen had been recently carried away by the sea." This statement appears to me to be rather disingenuous, considering that the area of British Vypeen is 44,000 square yards, or nine acres, and that the portion carried away during the past five months is only sixty-six square yards, or about the seventieth part of one acre. I have not overlooked this trifling encroachment, and I intended to include work to put a stop to it in the general scheme of defensive works which is now nearly ready for submission; but as it may take some time before the whole of the works are sanctioned, it would be as well perhaps to put this small portion of them in hand at once. The work required is a stone revetment along the north or Vypeen bank of the river, as shown by a dotted line in the accompanying sketch; its cost will be about 2,000 rupees, and if the Government approve of its being done at once, I request their authority to commence it. The people complain that, since the construction of Groyne No. [illegible], the sea has been more destructive in that neighbourhood than before, and they have asked to have the groyne removed. If the groyne has done no harm, it has certainly done no good, and I request permission to use as much of it as can be removed in the proposed revetment.

From Mr. M. A. PLATEL, Tahsildar, to the Assistant Engineer, Public Works Department, in charge of Public Works Operations, dated Cochin, 11th September 1869.

ADVERTING to your letter, No. 67, of yesterday's date, I beg to state that from inquiries I have made it would appear that during the last four months about 100 × 6 feet of land on the south-west side of Vypeen has been washed away. About ten cocoanut trees have fallen, and four huts have been removed. A small stone-built house was exposed to imminent danger, but this latter has been so since December last.

No. 461. ORDER THEREON, 22nd October 1869, No. 3,407.

CIVIL WORKS, No. 56.

THE Government authorize an additional expenditure, not exceeding Rupees 1,000, in extending the embankment referred to in paragraph 5, but they are of opinion that the construction of the stone revetment proposed in paragraph 6 should be deferred until the Harbour Engineer who is expected from England has reported on the works required at Cochin.

(True Extract.)

Captain, R.E.,
Acting Under Secretary to Government.

To the Officer in charge of Public Works Operations at Cochin.
,, Marine Department.
,, Controller of Public Works Accounts.
,, Accountant-General.

Exd. S. T. Augustin.

Cochin 11th September 1869.

5

J. O'Shaughnessy Esqre
Assistant Engineer. D.P.W. In charge of
Public Works Operations.
Cochin.

Sir,

Adverting to your letter No. 67. of yesterday's date, I beg to state that from enquiries I have made it would appear that during the last 4 Months about 100 x 6 ft. of land on the South-west side of Vypeen has been washed away. About 10 Cocoanut trees have fallen, & 4 Huts have been removed. A small Stone built house was exposed to imminent danger - but this latter has been so since December last.

I have the honor to be.

Sir,

Your most Obedt. Servant.

J. W. Laird

Collector

P.W. 4102

No 78

Cochin
27th September 1869

From

The Officer in charge of
Public Works Operations
Cochin

To

The Secretary to Government
Public Works Department
Madras

Sir,

I have the honor to enclose a sketch of the Cochin coast, shewing the position of an embankment I have recently constructed, to close a channel that has always existed between the Vypeen coast and the shoals in front of it.-

2 This channel is described in "Sweeny's" Survey of 1852, "as highly dangerous to vessels leaving with the ebb tide, owing to the very great velocity with which the tide runs through it," and by the Master Attendent of Cochin in a communication from him, printed with G.O. in the Public Works Department, dated the 24th March 1869, No 1003, "as likely to soon scour up, and form a very deep channel, by the terrible impetuosity with which the tide runs through it", and he recommended that even on the ground of economy, the Vypeen main grain should be extended, to the foreshore, as

I anticipate very favorable results from the closing of this channel, indeed the good effect of the embankment is already very apparent not only by the gradual extension of the beach to the north of it, but by the filling up of the deep channel in front of the Vypeen main groin. It has cost in round numbers 600 Rs, in addition to which, I request sanction for a further expenditure of any sum that may be required up to 1000 Rupees, to extend it seawards, whenever a favorable opportunity may offer by the shifting of the shoals, and to keep the tidal current in its new course, this amount can be met by transfer from the funds sanctioned for wooden groins in G.O. dated the 31st of May 1869, two of these groins being now unnecessary.-

I take this opportunity to submit a report from the Shasildar in reference to a statement made by certain residents in Cochin in a communication recently addressed by them to Government to the effect "that a considerable portion of Vypeen had been recently carried away by the sea." This statement appears to me to be rather disingenuous, considering that the area of British Vypeen is 44,000 square yards or 9 acres and that the portion carried away during the past 5 months is only 66 square yards or about the seventieth part of one acre. I have not overlooked this trifling encroachment, and I intended to include work to put a stop to it, in the general scheme of defensive works which is now nearly ready for submission, but as it may take some

time before the whole of the works are sanctioned, it would be as well perhaps to put this small portion of them in hand at once; The work required is a stone revetment along the north or Vypeen bank of the river, as shewn by a dotted line in the accompanying sketch; its cost will be about 2000 Rs, and if the Government approve of its being done at once, I request their authority to commence it.- The people complain that since the construction of groin No 7, the sea has been more destructive in that neighbourhood than before, and they have asked to have the groin removed. If the groin has done no harm, it has certainly done no good, and I request permission to use as much of it as can be removed, in the proposed revetment.-

I have the honor to be
Sir,
your most obedient servant

P. D'Rozario
Asst. Engineer D.P.W.

Public Works Department

No. 3407

13

Proceedings of the Madras Government

Under date the 22nd Octr 1869

Read the following

From The Officer in charge
P. Works Cochin.

No. 78 of 27th Septr 1869

The Government authorize an additional expenditure not exceeding Rs. 1000 in extending the embankment referred to in Para 5, but they are of opinion that the construction of the stone revetment proposed in Para 6 should be deferred until the Harbour Engineer who is expected from England has

Recd 27th Sept. 1869
Rep. 28
Enclosures - 3
1 Letter
1 Estimate

Referring the estimate of a retaining wall on the Pappen Ghaut and requesting sanction for the expenditure mentioned therein - Rec.

No. 3407 - 22nd Octr 1869 Rgt.

Reported on the work
required at Cochin

To
The Officer in ch:
of Ad Operations
at Cochin

Marine Deptt
Cochin
Accts Genl

Dept 23/10/49

Ccc 402

Govt. of {1869} Madras.

PUBLIC WORKS.

To

The Officer in charge of
Public Works
Operations at Cochin

Dated

Recd. Encl. 2

G. O. 22nd Feb. 1869, No. 3407

Nos. 460-461

Tidal channel Papers ordering the letter from the Offr. in charge of Pr. Operations at Cochin reporting the stoppage of a tidal channel on the Vypeen Coast, and requesting sanction for the expenditure incurred thereon.