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(2) Date of repair 23/7/86
(3) Initials of the Referencer lenz

TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

PUBLIC WORKS

DEPARTMENT

G.O. No.	2341-W	Press.
B.P. No.		Mis.
Dated	31/5/1878	197

AVS

Not to be folded or roughly handled.

2341 W

GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

31st May 1878, No. 2,341 W.

Buildings and Roads.
Civil Works.

Read the following paper :—

No. 340. From Lieutenant-Colonel R. B. KENNEDY, District Engineer, Malabar, to the Chief Engineer, Buildings and Roads, dated Calicut, 7th May 1878, No. 14.

REFERENCE—Proceedings of Government, No. 2,037, dated 3rd May 1878.

With reference to above I have the honor to report that the same abnormally high tides that I had occasion to bring to notice in my letter, No. 6, dated 22nd April 1878, as having occurred at Calicut appear also to have been experienced at Cochin, and on the 22nd ultimo I received through the Range Officer a report of damage done in close proximity to the Cruz Milagre Dam.

2. It appears that from opposite Malapuram for a distance of a mile southwards the sea washed over the crest of the beach, leaving in the hollow ground between Malapuram and the lagoon at Cruz Milagre a sheet of water about a mile in length, of an average width of 30 feet, and depth of about a foot, and that this gradually emptied itself into the lagoon; the water in the lagoon, in consequence of this and from having received a heavy fall of rain, rose considerably and topped a revetment that had lately been built; and outflanking the latter, cut a channel through the sand; the revetment itself remaining uninjured, though the water was running over it 9 inches deep; the gap was moreover quickly stopped up with sand bags, a number of which are always kept in readiness to meet any such contingencies.

3. The Range Officer started for Cochin immediately on receiving report of the above from his Overseer, and I instructed him to telegraph for me if on arrival there he found any serious damage done, when I held myself prepared to join him at once to concert remedial measures.

4. Mr. Grimes writing on the 24th ultimo reported his having that day inspected the site, and that the damage was of little extent, but that what had occurred tended to show the necessity of providing against the risk of recurrence on a larger scale; that the water had (as reported by the Overseer) outflanked a revetment lately built across the head of the escape channel, and cut another channel about 20 feet x 4 feet; that the only thing he considered necessary was that this revetment which is now 76 feet long should be completed for the further distance of 37 feet

* It has since been completed.

and well secured at the wings; that he had ordered this work* to be put in hand

at once on emergency, and would include the cost in the annual repair estimate. Mr. Grimes considers that but for the piece of revetment already built, the damage would probably have been very serious; but, as it is, further similar risk may be guarded against at small cost and with little difficulty. I have now the honor to forward for sanction an estimate for maintaining the dam and executing all necessary repairs, amounting to Rupees 484.

5. I quite agree with Captain Taylor that the presence of the deep lagoon at Cruz Milagre must always be a source of danger and consequent great anxiety; and it would be very desirable to widen and raise the dam by filling in a part, or still better, as Captain Taylor would like, the whole of the lagoon; at present the dam has not only to resist the accumulation of water of the lagoon itself, but the latter has its contents largely increased at every high tide, and every heavy shower of rain, by the drainage of the beach between it and Mullapuram; and it would be very desirable to intercept this by cutting drainage channels at intervals of some 150 yards apart and using the sand, &c., excavated in putting up embankments which would turn the drainage in small quantities into the backwater.

6. A sketch showing the position of the points alluded to in foregoing accompanies this.

No. 341. ORDER THEREON, 31st May 1878, No. 2,341 W.

THE estimate amounting to Rupees 484 for the maintenance of the Cruz Milagre Dam is sanctioned. The question of an appropriation of Port Funds will be considered in the Financial Department.

2. The District Engineer should forward an estimate for the drainage channels and other works proposed by him and report whether any portion of the lagoon has this year been filled up as recommended by the Master Attendant with the spoil obtained by dredging.

3. This sanction has been registered as special No. 23 B of 1878-79.

(True Extract.)

(Signed) E. A. FOORD, Colonel, R.E.,
Secretary. to Govt., P.W.D.

(True Copy.)

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

To the District Engineer, Malabar.
„ Examiner of Public Works Accounts.
„ Financial Department.

Exd. E. C. Shunker.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1878) Madras.
PUBLIC WORKS.

To
THE DISTRICT ENGINEER,
MALABAR,
&c., &c., &c.

Dated May 31st.
Issued
Recd. End.

G. O., 31st May 1878, No. 2,341 W.

MAY.

No. 340-341.

Crus Milagre Dam.—The estimate of Rupees 484 for the maintenance of the — sanctioned, and the District Engineer called on to submit estimates for channels and other works proposed.

General No 49/1878-79

Estimate of the probable cost of Maintenance of the Crus Milagre Dam for the year 1878/79.
Cochin Sub Division
Malabar District

No.	Measurements	Particulars	Rate		Amt.	Total	Remarks
			Q	B			
12	6	Coconut piles driven in			8" each	6	Estimate submitted with this Office letter No. 2 dated 24 th April 1878.
2	36	Cft. Planks fastened			14" cft.	42	
1	36	Byds Filling in mud			4" cft.	6	
1	36	Rough stone flooring on top					
1	36	Do for Wing walls					
1	36	Rough stone flooring on rear					
1	36	Do for apron					
	12	Rough stone			2" cft.	48	
		Surfing					
1	150	Side Groyne No. 1 with return					
		Carried over				102	
		Total					

opposite Malapuram for addition.

Sl. No.	Measurement	Estimated Costs	Actual Costs	Particulars	Rate	Est. Total	Remarks
				Brought forward		102.00	
1	160	5	700	Side Groyne No. 2 with return			
1	200	5	1000	Do. No. 3 do			
		Total 2450					
1	190	5	1/3	816 2/3 Sft. or 272 2/3 Sft. Surfing and mud	2.50	34.00	
1	190	3	3/4	1102 1/2 Cft. or 30 1/2 Cycles. Stone Pitching	2.00	60.80	
2	200	3	3/4	1102 1/2 Cft. Levelling top of Groyne with clay			
1	60	20	6	900 Do. double earl and west			
				7200 Do. near main Groyne			
		Total 9202 1/2		9202 1/2 Cft. or 360 5/8 Cycles. Clay	4.00	853.40	
1	105	17		Thatching Store Room			
1	60	18		Do. of Bungalow			
	28	9		Do. Cook room			
	18	8		Do. Watchman's Shed			
	8	8		Do. closet			
		Total 3325					
9				33 1/4 Sft. Thatching	14.50	619.00	
12				Watchmen for 3 months	6.00	54.00	
				Do. for the whole year	3.00	36.00	
				Total		413.44	
				Superintendence 20-11-8			
				17 1/2 Smdies 10.00			
				Contingencies 40.00			
				Total		701.80	
				Amount of Estimate Rupees		484.00	

Est. Yearly Maintenance Grant Rs. 485 sanctioned on 4.0.1877.

Crux Milagre Dam
27th April 1878

W. H. Keirsey
Assistant Engineer
Sd. Off.
District Engineer
Bombay

W. H. Keirsey
Assistant Engineer
Sd. Off.
District Engineer
Bombay

23413

opposite Malabar

Specification to accompany Estimate No 484
for Maintenance of the Cruz Milague
Dam for the year 1878-79 ⁵/₂₃₄₁

Owing to the breach 20' x 4' that happened at the northwestern extremity of the lately built revetment at the head of the Surplus Channel, which has partially been filled with sand bags, it is proposed to lengthen the revetment northward to a length of 36 feet by driving in 2 rows of coconut piles 6 feet apart and nailed inside with planks 2" thick and then filling in the space with mud, revetting top and rear with rough stone for the surplus water to discharge without carrying away sand to prevent deepening of the channel, and prevent backwater flowing into the lagoon; and this will also secure the whole head width of Surplus Channel about 112' allowing surplus to escape without danger.

X Work
commenced
in January
1879

The top of groynes and returns are to be renovated with clay to repair the damage caused by weather, and the sides to be re-
= turfed X²

opposite Malapuram head

turfed &c to prevent corrosion, by putting
in a layer of mud, and turfing; and small
stones to be closely packed over to preserve
the turf from being blown off by wind
or washed away by rain.

The sheds are to be rethatched with
fresh cadjans, and watchers engaged through-
out the year to preserve the materials from
spoliation and damage as well as to do the ur-
gent repairs that may be required from time
to time during the south-west monsoon.

Bruf Milagre Dami
27th April 1878

H. H. H. H.
Assistant Engineer SPM

W. B. Keene
District Engineer
Malabar

opposite Malapuram for adition

Malabar Dist. Engg Office
 Calicut 7th May 1878
 Despatched 14th May 1878
 2341 W
 From The District Engineer,
 Malabar.

The Chief Engineer,
 Roads & Buildings,
 Madras.

Sir
 Reference - Proceedings of Government
 No. 2037, dated 3rd May 1878.

With reference to above,
 I have the honor to report that
 the same abnormally high tides
 that I had occasion to bring to
 notice in my letter No. 6 dated
 22nd April 1878 as having occurred at
 Calicut appear also to have been
 experienced at Cochin, and on the
 22nd ultimo, I received through the
 Range Officer a report of damage
 done in close proximity to the
 Cruz Milagre Dam.

2. It appears that from
 opposite Malapuram for a distance

Cochin Sub Division
 Malabar District

Dated 27th
 Received April 1878

Estimate and Report
 on the Cruz Milagre
 Dam for the year 1878.
 179.

Estimate No 484.

me
 st
 to

for
 15
 1878

2

of a mile southwards, the sea washed over the crest of the beach, leaving in the hollow ground between Malapuram and the lagoon at Cruz Milaga, a sheet of water about a mile in length, of an average width of 30 feet, and depth of about a foot, and that this gradually emptied itself into the lagoon; the water in the lagoon in consequence of this, and from having received a heavy fall of rain, rose considerably, and topped a revetment that had lately been built, and outflanking the latter, cut a channel through the sand; the revetment itself remaining uninjured, though the water was running over it 9 inches deep; the gap was moreover quickly stopped up with sandbags, a number of which are always kept in readiness to meet any such contingencies.

The Base Officer at Malapuram

for Cochin immediately on receiving ^{report of} the above ~~report~~ from his Overseer, and I instructed him to telegraph for me if on arrival there he found any serious damage done, when I held myself prepared to join him at once to concert remedial measures.

4. Mr. Grimes writing on the 24th ultimo, reported his having that day inspected the site, and that the damage was of little extent, but that what had occurred tended to show the necessity of providing against the risk of recurrence on a larger scale; that the water had (as reported by the Overseer) outflanked a revetment lately built across the head of the escape channel, and cut another channel about 20' x 4'; that the only thing he considered necessary was that this revetment which is now 76 feet long, should be completed for the further distance of 37 feet,

and well secured at the wings.
that he had ordered this work
to be put in hand at once ^{it has since}
on emergency, and would include ^{been completed.}
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estimate. Mr. Grimes considers
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would probably have been very
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at small cost, and with little
difficulty. I have now the
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an estimate for maintaining
the dam, and executing all
necessary repairs, amounting
to Rs 484.

5. I quite agree with
Captain Taylor that the
presence of the deep Lagoon
at Grey Milage must always
be a source of danger, and
consequent great anxiety, and
it would be very desirable
to widen, and raise the dam
in a part, or still

better, as Captain ⁹Taylor would
like, the whole of the Lagoon;
at present, the dam has not
only to resist the accumulation
of water of the Lagoon itself,
but the latter has its contents
largely increased at every high
tide, and every heavy shower
of rain, by the drainage of the
beach between it and Malapurm,
and it would be very desirable
to intercept this by cutting
drainage channels, at intervals
of some 150 yards apart, and
using the sand &c. excavated,
in putting up embankments
which would turn the drain-
age in small quantities into
the back water.

6. A sketch showing the
position of the points alluded
to in foregoing accompanies this.

I have the honor to be
Sir,

Your most Obedt. Servant
Wt. B. Keene Esq. Lt. Col.
District Engineer
Malabar

G.O. 3157 - 24.11.76
" - 2034 W - 3.5.78.
" - 2037 W - 3.5.78.

563. 27.12.76. Same

396. 29.6.77 - do.

624 W. 22.8.77.

871 W. 21.2.78.

1216. 9-4-77.

Roads and Buildings

From the District Engineer,

Malabar.

N. 14.

Dated 7th May 1878.

Recd. 17

Enclosures 2.

Cruz Milagre Dam. - Submits
an Estimate for Rs. 486 for maintain-
ing the same for sanction.

Recd 27.5.78. No 31.5.78

13711
Public Works Department.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 31 May/78

Read the following:-

From the District Engineer (H.E. No 14.77. May/78)

The estimate
amounting to Rs. 486
for the maintenance of
the Cruz Milagre Dam
is sanctioned. The
question of an appropri-
ation of Port funds will
be considered in the
Financial Department

The District Engineer
should forward an esti-
mate for the drainage
channels and other works
proposed by him and
report whether any portion
of the lagoon has this
year been filled up

as recommended by
the Master Attendant
with the spoil obtained
by dredging.

907
27/5

This sanction has been
registered as Special No. 23/B
of 107079.

L. E. Mahabadi
Ex. S. W. A. With T. B. Mahabadi
T. B. Mahabadi

107079-1-78

5655

Govt. of (1878) Madras.

PUBLIC WORKS.

To

Dated

Issued

Recd.

Encl.

G. O., 31 May 1878, No. 23417

Nos.

Criz Milage Dam

The estimate of Rs 484
for the main tenance of the —
sanctioned, & the DE called on
to submit estimates for
channels & other works proposed

Estimate