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MADRAS RECORD OFFICE.

Government of Madras.

DEPARTMENT.

G.O. No.	Press Mis.
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Dated	18 11.

Not to be folded or roughly handled

No. 338-A. Read the following letter from the Officiating Superintending Engineer, 6th Division, to the Secretary to Government, Public Works Department, dated Tanjore, 10th October 1871, No. 621:—

I HAVE the honour to report that by a very heavy flood in the Ooppaur on the night of the 1st instant, part of one of the wing-walls of the Tirumungalam dam across the Ooppaur, Trichinopoly District, was washed away, together with a considerable portion of the south bank of the river which had been lately erected.

1 Sketch.

2. In April 1871 an estimate, amounting to Rupees 6,270, was sanctioned by the Superintending Engineer for repairing the Tirumungalam dam, and the work was commenced in that month; while it was in progress a heavy flood* came down the river and did such damage that it was necessary to re-construct a large part of the dam at a considerable expense. An estimate, amounting to Rupees 11,490, was then submitted and sanctioned by Government on the 7th August. The work was gone on with according to this estimate, and was carried on uninterruptedly with only one or two breaks for a few days, caused by the preparation of bricks being delayed by rain. The work of getting down the foundations 10 feet below the river bed was very tedious and consumed a great deal of time. The dam, however, was completed, with the exception of some extension of rough-stone apron and repair of part of the lower steps to the old work, by the 16th September 1871.

* Reported to Government in Superintending Engineer's letter No. 128, dated 9th May 1871; in G. O., No. 1,401, of 22nd idem.

3. The accompanying rough sketch will illustrate the position of the work and the measures taken to prevent damage by untimely floods. A cross bank was erected at A B and the river diverted by a cut shown at C D, the nose of the padugay left being protected by grass revetment.

4. On the 4th September an unexpected fresh came down the river and washed away a large portion of the old padugay immediately above the temporary bund A B, which was itself in danger of being carried away. The Executive Engineer immediately put up a screen facing to protect the bund, at the same time pushing on with the work which was approaching completion. On the 16th another fresh came down the river, washed away the whole of the facing and threatened to take the wing-wall of the dam in rear. To prevent this, the Executive Engineer determined (the work being completed with the exceptions noted above) to cut the cross bank and let the water over the dam, keeping both tambogees open to reduce the water as much as possible. This was done and there only remained to close the breach above the dam on the subsidence of the water. The Revenue authorities were applied to for help, and a large number of coolies collected and materials prepared and the work commenced on the 25th. The breach was not so large but that it should have been substantially closed within four days if a sufficient number of coolies could be kept at work; but though Lieutenant Brockman was out on the work himself from morning to night, he was unable to keep the coolies from deserting, and consequently the work did not proceed as quickly as it should. The bund, however, was made up to a height of 2¼ yards above the crown of the dam by the 29th. On the night of the 29th a heavy flood came down the river, and this bund breached to a width of about 30 yards. The

river continued in flood the two following days, and there was also heavy rain at the work which prevented this breach being closed, and on the night of the 1st instant an extremely heavy flood came down washing away nearly the whole of the new bund, and undermining and carrying away a portion of the front wing-wall of the dam about 45 feet in length. The flood was so heavy that notwithstanding the greatly increased width of waterway, in consequence of the bund having been washed away, the water rose to 6 feet above the low crown of the dam, and the country below was completely flooded.

5. On the morning of the 3rd I visited the work and directed that all the rough stone and debris of the old work on the spot should be thrown in round the end of the broken wing-wall to prevent any further scouring near the wall, and that a groyne should be thrown out from the end of the wing-wall to divert the current from the back of the wall; also that the remains of the cross bund should be removed and bunds put up to prevent the water over-topping the low portions of the broken wing in the event of another flood. This is all that can be done in the present state of the weather, there having been heavy thunderstorms every afternoon for the past week. If, when the water subsides, we should have a week of settled weather and could collect 1,000 coolies, I believe a bund might be put up that would in all probability stand any fresh we may have, if not the work will have to remain as it is at present till after the monsoon, and the consequence will be that the cultivation under the Panguny channel will almost entirely be lost. I am prepared to make the attempt with the assistance of the Revenue authorities should there be an opportunity; the work will cost, I believe, about Rupees 1,500.

6. The new work, though exposed to a violent flood while the new masonry was yet green, has not suffered to any great extent. There is a slight subsidence of the cut-stone apron which covers the first step, but no stones have been washed out; one stone only has been displaced, the end stone of the upper course of new tambogee facing. I found no holes below the apron, and the rest of the work appeared to be sound.

7. I do not consider that the damage which has occurred is attributable to any neglect or want of care on the part of any officer of this department. The flood in the month of May threw the work back so much that the larger estimate was begun upon far too late in the year, but it still would have been fully completed before the monsoon had not these unusually heavy rains unfortunately set in. The difficulties in the way of getting down foundations were great, and the soil at the spot is very bad for the purpose of making bunds to stand against such a violent rush of water. The Ooppaur has a fall, I am informed, of about 15 feet a mile, and the rush of water described by Captain Vertue, in his letter forwarded with the estimate above noted and also by Lieutenant Brockman, is tremendous; the roar of the coming fresh is heard at the dam while the water is yet many miles off. The effects of such a flood on an unfinished work may be imagined.

8. I have already sanctioned an estimate amounting to Rupees 1,730. In repairing the damage done by the earlier freshes of this month, and to complete the bank (should the weather permit) I calculate a further sum of Rupees 1,000

will be required. This I can temporarily provide from the balance remaining on Agricultural Repairs; but the allotment will ill-bear so large a sum being taken from it, and I trust that Government will be able to increase the repair allotment for the Trichinopoly District by the same amount as I have been compelled to divert for these extraordinary repairs.

9. I have been in communication with the Collector on the subject, and have arranged that should the weather appear more settled next week and the floods have subsided, an attempt should be made with his assistance to close the existing breach and save some of the Panguny cultivation. On the receipt of accounts called for from the Range Officer, I shall be able to report the actual expenditure on the work and the sum required to repair damages caused by these floods, and I trust that I shall also be in a position to report that the work has been rendered safe and the cultivation insured for this season.

No. 338-B. ORDER THEREON, 20th October 1871, No. 2,674-A.

IRRIGATION, No. 16-A.

THE Government approve of the measures which have been and are proposed to be taken for the restoration of the Tirumungalam Anicut; and, looking to the importance of closing the breach as early as the weather will admit in order to save the large extent of cultivation dependent on the work, the Governor in Council will rely on the Revenue Department rendering every aid in the collection of coolies and in preventing their desertion.

2. Endeavours will be made to supplement the Agricultural Repair grant of the Trichinopoly District later in the year.

(True Extract.)

(Signed) J. CARPENDALE, Colonel, R.E.,
Secretary to Government.

To the Revenue Department.
" Superintending Engineer, 6th Division.

Exd. E. C. Shunker.

No 621

Supg Engineer's Office 6th Div.
Tanjore 10 October 1871.

From
Captain J. O. Hasted R. E.
Offg Supg Engineer 6th Divn

To
Colonel J. Lazpendale R. E.
Secretary to Government
P. W. D.

Enclosure
1 Sketch

Sir,

I have the honor to report that by a very heavy flood in the Coleroon on the night of the 1st instant, part of one of the wing walls of the Tiruvangalam Dam, across the Coleroon, together with a considerable portion of the South Bank of the River which had been lately erected

2. In April 1871, an Estimate amounting to Rs 6270 was sanctioned by the Supg Engineer for repairing the Tiruvangalam Dam; and the work was commenced in that month; while it was in progress a heavy flood came down the River and did such damage that it was necessary to reconstruct a large part of the Dam at a considerable Expense. An Estimate amounting to Rs 11,490 was then submitted and sanctioned by Government on the 7th August

The

The work was gone on with according to this Estimate, and was carried on uninterruptedly with only one or two breaks for a few days, caused by the preparation of bricks being delayed by rain. The work of getting down the foundations 10 feet below the River-bed was very tedious and Consumed a great deal of time. The Dam, however, was Concluded with the exception of some Extension of rough stone apron and repair of part of the Cover-steps to the old work, by the 16th September 1871.

3 The accompanying rough Sketch will illustrate the position of the work and the measures taken to prevent damage by untimely floods. A cross bank B was erected at A. B. and the River diverted by a Cut shown at C.D. the nose of the Paduguy left being protected by Grass revetment.

4 On the 4th September an unexpected fresh came down the River and washed away a large portion of the old Paduguy immediately above the temporary bund A. B. which was itself in danger of being Carried away. The Executive Engineer immediately put up a screen facing to protect the bund, at the same time pushing on with the work which was approaching Completion. On the 16th another fresh

fresh came down the River, washed away the whole of the facing and threatened to take the Wing wall of the Dam in rear. To prevent this, the Executive Engineer determined (the work being Completed with the Exceptions noted above) to cut the Cross bank and let the water over the Dam, keeping both tambogees open to reduce the water as much as possible. This was done and there only remained to close the breach above the Dam on the Subsidence of the water. The Revenue Authorities were Applied to for help and a large number of Coolies collected and materials prepared and the work Commenced on the 25th. The breach was not so large, but that it should have been Substantially Closed within 4 days, if a sufficient number of Coolies could be kept at work, but though Lieutenant Brockman was out on the work himself from morning to night, he was unable to keep the Coolies from deserting and Consequently the work did not proceed as quickly as it should. The bund, however, was made up to a height of 2½ yards above the Crown of the Dam, by the 29th. On the night of the 29, a heavy flood came down the River, and this bund breached to a width of about 30 Yards. The River Continued in flood the

the two following days, and there was also heavy rain at the work which prevented this breach being closed, and on the night of the 1st Instant, an extremely heavy flood came down, washing away nearly the whole of the new bund, and undermining and carrying away a portion of the front Wingwall of the Dam, about 45 feet in length - the flood was so heavy that, notwithstanding the greatly increased width of waterway in consequence of the bund having been washed away, the water rose to 6 feet above the low crown of the Dam and the country below was completely flooded.

5 On the morning of the 3rd, I visited the work, and directed that all the rough stone and debris of the old work, on the spot, should be thrown in round the end of the broken wingwall to prevent any further scouring near the wall, and that a groyne should be thrown out from the end of the Wingwall to divert the Current from the back of the wall, also that the remains of the cross bunds should be removed and bunds put up to prevent the water overtopping the low portions of the broken wing in the event of another flood -

This is all that can be done in the present state of the weather, there having been heavy thunderstorms every afternoon for the last week - If, when the water subsides, we should have a week of settled weather and could collect 1000 Coolies, I believe a bund might be put up that would in all probability stand during fresh we may have, if not the work will have to remain as it is at present, till after the monsoon, and the consequence will be that the Cultivation under the Pangum channel will almost entirely be lost - I am prepared to make the attempt with the assistance of the Revenue Authorities, should there be an opportunity, the work will cost, I believe, about Rs 1500.

6 The new work though exposed to a violent flood, while the new masonry was yet green, has not suffered to any great Extent - There is a slight Subsidence of the Cut stone Apron which covers the first step, but no stones have been washed out: one stone only has been displaced, the end stone of the upper course of new tambagee facing - I found no holes below the Apron, and the rest of the work appeared to be sound.

7 I do not consider that the damage which has occurred, is attributable to any neglect or want of care on the

the two following days, and there was also heavy rain at the work which prevented this breach being closed, and on the night of the 1st Instant, an extremely heavy flood came down, washing away nearly the whole of the new bund, and undermining and carrying away a portion of the front Wingwall of the Dam, about 45 feet in length - the flood was so heavy that, notwithstanding the greatly increased width of waterway in consequence of the bund having been washed away, the water rose to 6 feet above the low crown of the Dam and the country below was completely flooded.

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7 I do not consider that the damage which has occurred, is attributable to any neglect or want of care on the

the part of any Officer of this Department - The flood in the month of May threw the work back so much that the larger Estimate was begun upon far too late in the year, but it still would have been fully Completed before the monsoon had not these unusually heavy rains unfortunately set in - The difficulties in the way of getting down foundations were great and the soil at the spot is very bad for the purpose of making bunds to stand against such a violent rush of water - The Coliyaur has a fall (I am informed) of about 15 feet a mile, and the rush of water described by Captain Vertue in his letter forwarded with the Estimate above noted, and also by Lieutenant Brockman, is tremendous; the roar of the coming fresh is heard at the Dam while the water is yet many miles off - The effects of such a flood on an unfinished work may be imagined -

8 I have already sanctioned an Estimate amounting to Rs 1730 — for repairing the damage done by the earlier freshes of this month, and to complete the bank (should the weather permit) I calculate a further sum of Rs 1000 will be required - This I can temporarily provide from the balance remaining on Agricultural Repairs, but the allotment will ill bear so large a sum being taken from it and I trust that Government will be able to increase the Repair Allotment for the Trichinopoly District by the same amount as I have been compelled to divert for these Extraordinary Repairs -

9 I have been in communication with the Collector on the subject and have arranged that should the weather appear more settled next week and the floods have subsided, an attempt should be made with his assistance to close the existing breach and save some of the Paugam Cultivation - On the receipt of Accounts called for from the Range Officer, I shall be able to report the actual expenditure on the work and the sum required to repair damages caused by these floods, and I trust that I shall also be in a position to report that the work has been rendered safe and the cultivation insured for this Season -

I have the honor to be
Sir
Your most Obedient & Servant -

John Ast - Captain R.E.
Offg Supg Engineer 6th Div.

No 2 Bty 1st Div

Lieut Colonel Turner Commdg

The Commandant

Reports of the measures which have been, and are proposed to be taken for the restoration of the Terminagalam Embankment, and roofing to the

important of closing the breach as early as the weather will admit in order to save the Coolie earth work

Rec'd 22nd Aug/71 pp 388-389
" 7 Sept — 115-126
" 7 Oct — 59-60

Ordnance Office
1st Division

To The Secretary to Govt N.W.P.
No 621
dated 10 Oct 71
Rec'd 13

Enclosure 1

Reporting damages done to Terminagalam Dam by a heavy flood in the Coosaun

No 2674 dt 20 Oct 71

No 338 A

e. 6004 4 Oct 1871

work, the Governor in Council will rely on the Revenue Departt rendering every aid in the collection of Coolies and in preventing their desertion. Endeavours will be made to supplement the Agricultural Returns of Mechanisky & Cutchery in the year -

W. H. Clerk

39

Rev Deptt Mr S Dyer
I. Engd & D.

Mr S desire to thank Rev Dept for copy
Mr S desire to thank Dr Rev Dept -
P-C — to Secretary 2/11/71.

E- bo - 4861-

Govt. of {1871} Madras.

PUBLIC WORKS.

To The Private Department

Dated.

Read. Encl. 1

G. O. 20th Oct. No. 2674 A

Nos. 3 Ref. 2 Encl.

Letter enclosing Annual Triennial Statement of the measures adopted for the restoration of the Annual and permanent supplement the agricultural relief of the Districts in the year.