M.R.O. 1—77,066—6-6-37.

(1) Number of pages 44

(2) Date of repair 24 6 [illegible]

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 1030 Press / Mis.

282-283

Dated 12-4 1844

Not to be folded or roughly handled

No. 282. Read the following letter from Captain J. BEAN, R. E., Officiating Superintending Engineer, 6th Division, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Tanjore, 15th March 1864, No. 2,133:—

SIR,

1. Being now on my return from the Lower Coleroon Anicut, where I made a halt of three or four days, I have the honor to report on the subject referred to me in Order No. 3,796 of the 22nd December last, as well as to forward Plans and Estimates for re-building the fallen portion of the bridge and Anicut, a catastrophe which occurred in December last, and reported by the then Superintending Engineer on the 14th of the same month.

1 Plan (per banghy).
1 Abstract Estimate.
1 Report.
1 Sketch.

2. The Estimate amounts to Rupees 24,000, and though six arches only have fallen, and Colonel Foord on his visit to the work took precautions to prevent damage to the outermost arch, by building up cubes temporarily and adding to the thickness of the pier, yet I regret to say that the sudden fall of the six arches southward of the northern abutment of the southern branch has had its effects upon the standing work of the adjoining body and arches, and the sluice arch, which is next to the fallen ones, is in such a dangerous state, that it will have to be taken down. During my stay at the Anicut a crack down the key has extended longitudinally through the arch, and both haunches are cracked and opened out in a dangerous manner. A slight settlement has also taken place in the body of the Anicut, between the piers of the next large arch, and though this is rather an ominous movement, yet I am in great hopes of saving this portion of the work but not the sluice arch.

3. I have had commenced a standing centring under the arch adjoining the sluice arch, and as soon as it is built, and the remaining arches secured, I have ordered the sluice arch to be removed and re-built with the others in due course. The falling of the arches has caused the opening out of large transverse cracks in the body of the work adjoining the northern pier of this sluice arch, but I shall endeavour to re-build the fallen portion without having to remove this pier. Owing to the quantity of cut-stone in the faces of the sluice piers, it is very desirable we should not re-build more of this portion than is absolutely necessary at this critical period of the season, though I have left orders and made arrangements for the re-construction of all the unsound works.

4. Owing to Mr. Supervisor Bateman's indisposition, and the absence of the Táluq Overseer Serjeant Doheny on four months' sick leave, the work at first had not progressed very expeditiously. The Overseer returned, however, in the middle of last month, when he was stationed at the Anicut, and I trust, with Mr. Bateman's experienced supervision, the progress will continue as satisfactory as when I was present, and that the arches will be turned by the end of June. A high bank is being thrown round the works, and as advantage has been taken of an island immediately above the Anicut in encircling the northern portion, I believe we shall be able to keep out river freshes, should any make their appearance.

5. In the Estimates I have only allowed for re-building the retaining wall and flooring of the arches, to correspond with that of the portion now standing. From paragraph 2 of the above Order, I am not sure that I am correct in inferring that Government was not aware that the bridge in front of the Anicut had a retaining wall from pier to pier, but I do not believe Colonel Foord was aware of it, and the impression conveyed by his letter would lead me to suppose that he advocated such a protective work from the omission of such walls in the original plans. I found, by the level, that the depths of these walls were only 8½ feet in the old work, but this I think insufficient, and I have allowed for 16 feet to the bottom of the wells.

6. As regards the scour said to be caused along the face of the Anicuts, I must say that I did not discover any very great traces of it, and, certainly, that shown in the north branch has not worked injuriously. There is no appearance whatever of this action in the southern branch, but this may be owing to the partial blocking up of the vents and to the shutters having been left in the Anicut most of last season.

7. In Government Order of the 24th February 1863, No. 479, a sum of Rupees 200 was authorized for expenditure in shutting up the vents with brick masonry, but only one, and a half of a second sluice have been so treated, owing, I believe, to the difficulty found in carrying out the work from the freshes, and no groynes of any kind have been thrown out. I would strongly recommend that the sluices be now left as they are, as I am of opinion that the occasional scour by their means serves in a certain manner to regulate the bed above the Anicut, though I would not recommend an increase in the number of these sluices as urged by Colonel Birdwood. The level of the bed above the Anicut of the southern branch at this present season is, on the average, the same as the crown of the work; but I do not foresee any evil consequences from the raising of the natural bed in this manner.

G. O. No. 387, dated 8th March 1862.

8. The only action at present discernable is the eddy formed at the cut water of each pier, though the bed of the river being at present on a level with the top of the Anicut, this action has not extended to a greater depth than the top of the foundations and level of the flooring of the arches. To protect the cut waters, the sluices and any other portions of the stream side of the work requiring attention, I propose to throw in the material now being broken up from the old work, to a depth of a yard or more, according to the quantity available, and I hope Government will approve of this measure. I find that there are between one and two thousand cubic yards of broken masses of brick in chunam, many of them certainly of very small size, yet available at the mere cost of carriage for the protection of the work. Thrown in or packed at the cut waters of the bridge, sluices, and elsewhere, these broken pieces would act to a certain extent as groynes and counteract any lateral scour, whilst the material could be better utilized in this manner than by throwing it in, in rear of the aprons, and being sunk on a level with the flooring of the work would not produce any dangerous scour through the arches.

9. There can be no doubt that the extension of the Anicut's southern branch, some years ago and its bridge above, were not carried out with the very best material procurable. There has been a leakage through the work in places, showing itself on the aprons and elsewhere, but when the seven arches and corresponding Anicut, now in course of erection, are carefully completed with good materials, and with a proper depth of front retaining wall and flooring, there is no reason to suppose that any danger will happen to it, especially if the lateral scour be effectually checked.

10. The Supervisor in charge of the Anicut will not be able to expend more than the 10,000 Rupees, this season, advanced in Order quoted above for the preparation of material. A sum of Rupees 1,300 has been sanctioned from the Budget allotment for the general repairs of the Anicut, and this work will be put in hand at the same time as the re-building of the arches, and will be completed in the present official year.

No. 283. ORDER THEREON, 12th April 1864, No. 1,030.

1. With this letter, the Superintending Engineer, 6th Division, submits an Estimate, amounting to Rupees 24,000, for re-building the portions of the Lower Coleroon Anicut and Bridge which fell in December last. The effects of the accident have been felt beyond the limit of the six arches which actually fell. The adjoining arch, a small one over one of the sluices, has been cracked in a dangerous manner, and will have to be re-built. A slight settlement has also occurred in the body of the Anicut, between the piers of the next large arch, but this portion of the work the Superintending Engineer hopes to save.

2. Captain Bean reports that he could discoyer no trace whatever of a lateral scour along the face of the south branch of the Anicut. This he attributes to the partial closing of the sluices, a work which was ordered* to be carried out more than a year ago, but which was interrupted by the freshes in the river. At the same time he recommends that no more of the sluices should be closed, being of opinion that the occasional scour by their means serves

* G. O. No. 479, 24th February 1863.

to regulate the bed above the Anicut. Upon this point the Government adhere to their former decision. The effect produced by the sluices in the removal of deposit seems to be insignificant, while their influence upon the Anicut, by encouraging a lateral scour, must be injurious. The sluices will therefore be closed.

3. Captain Bean proposes to protect the piers of the bridge by throwing in masses of masonry, now being broken up from the old work, so as to form groynes in front of the cut-waters, and to counteract any lateral scour. This measure is approved of, but care should be taken that the construction of these groynes does not increase the leakage. The Government consider that it would be advisable to throw in clay in front of the cut-waters: the broken masonry carefully packed above the clay would protect it from the current.

4. With these remarks the Government sanction the Estimate before them. The sum of Rupees 10,000,† has been already allotted for the work, and the Superintending Engineer states that this is sufficient for the year's expenditure. Provision will be made for the balance from the Reserve Fund of next year.

† G. O. No. 3,796, 22nd December 1863.

(True Extract.)

(Signed) CHARLES, A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 6th Division.
,, Accountant General.
,, Controller and Auditor of Public Works Accounts.

Exd. S. T. Augustin.

22nd Dec.r/63 N.r 561-
562-

1864 Depart.
Fortn. Gov.t Gen.l April.
Ch.f Eng.r Sur.g Engineer
6th Division

Sir I have the Secretary to Government
of Bombay

Dated 15th
Rec.d 19th } March 1864

No. 2133

Enclosures 4

Forwards Plan, Estimate
and Reports on the
Fallen Arches of the
Lower Colaroon Anicut
and on the progress of
work towards its
Restoration

No. 252

c. 1st April 1864 A. 65

No 1030-12th April/64

Public Road. Repairs.

Abstract Estimate No. of 1863/64

Tanjore District

Kombaconum Taluq.

7

Work — Reconstructing a portion of South Branch of the Lower Coleroon Anicut and Bridge.

Quantities	Description of Work.	Rate	Amount	Amount of each part.
154	Wells — for foundation — Diameter outside /4½ x 6/ Complete — each	17 12 -	2733 8 -	
59046¾	Cubic feet of Brick in Chunam &c.	- 2 -	7380 3 6	
25865½	Sup.ᵉ feet of Plastering — per Sq.ʳᵉ	2 - -	517 4 11	
1140	Cutstones for Anicut —			
800	Deduct — Old — Dᵒ —			
340	Cft.ᵏ of New Cutstones — per Cft.ᵏ	- 10 -	212 8 -	
800	Dᵒ — of Rebuilding Old Cutstones — Dᵒ	- 4 -	200 - -	
3498¾	Laterite stones —			
1440	Deduct — Old — Dᵒ —			
2058¾	Cft.ᵏ of New Laterite Stones — Cft.ᵏ	- 4 -	514 11 -	
1440	Dᵒ — of Rebuilding Old Laterite — Dᵒ	- 1 -	90 - -	
2000	Cubic Yᵈˢ of Old brick masonry to be thrown in front of Cutwaters and Sluices — per C.Yᵈ	- 2 -	250 - -	
	Removing Debris &c. from Old foundation —	- - -	1700 - -	
	Excavating foundation —	- - -	600 - -	
	Baling —	- - -	2500 - -	
4	Centrings —	- - -	1200 - -	
	Scaffolding —	- - -	300 - -	
	Carried forward	- - -	18198 13 5	

Brought forward £	-	-	18198	13	5			
Temporary Sheds &c.	-	-	150	-	-			
Embankments &c.	-	-	3,500	-	-	21,848	13	5
Sundries and Contingencies	-	-	-	-	-	2,151	2	7
Total Estimate Rupees						24,000	-	-

Supt. Engineer's Office 6th Div.
Tanjore
15th March 1864

J Heath Captain R.E.
Offg. Superintg. Engineer 6th Div.

P. W. D.

No 1030

Proceedings of the Madras Government
Under date the 12th April 1864

Read the following letter

From the offg Supt. Engineer 6th Division

Forwards Plan & Estimate, & reports on the fallen Arches of the Lower Coleroon Anicut and on the progress of work towards its restoration.

(Here enter 15th March 1864 No 2133.)

Writes this letter, the Superintending Engineer, 6th Division, submits an Estimate amounting to Rs. 24.000 for rebuilding the portions of the lower Coleroon anicut & bridge which fell in December last. The effects of the accident have been felt beyond the limit of the two arches which actually fell. The adjoining arch, & much the outer one of the sluices has been cracked in a dangerous manner, & will have to be rebuilt. A slight settlement has also occurred in the body of the anicut, between the piers of the next large arch, but this portion of the work the Offg Engineer hopes to save.

Captain Bean reports that he could discover no

Remarks

WD

JP

Enclosure in a letter &c
2133 dated 15th March
1864
From the Supt of Engrs
6th Div
To the Secy to Govt P.W.D.

PWD 1238/64

trace whatever of a lateral scour along the face of the south branch of the ancient. This he attributes to the partial closing of the sluices, - a work which was ordered to be carried out more than a year ago, but which has been interrupted by the freshes in the rivers. At the same time, he recommends that no more of the sluices should be closed, being of opinion that the occasional scour by them means serves to regulate the bed above the ancient. Upon this point the Govt. adhere to their former decision. The effect produced by the sluices in the removal of deposit seems to be insignificant. While their influence upon the ancient, by encouraging a lateral scour, must be injurious. The sluices will therefore be closed.

Captain Bean proposes to protect the outer piers of the bridge by throwing in masses of masonry, now being

* G.O. 479
24. February. 63.

* See over page

broken up from the old work, so as to form groynes in front of the cutwaters, & to counteract any lateral scour - this measure is approved of but care should be taken that the construction of these groynes does not increase the leakage. The Govt. consider that it would be advisable to throw in clay in front of the cutwaters: the broken masonry carefully packed above the clay would protect it from the current.

With these remarks the Govt. sanction the estimate before them. The sum of Rs. 10000 has been already allotted for the work, & the Supt. Engineer states that this is sufficient for the year's expenditure. ~~The~~ ~~Estimate~~ ~~Estimate~~ ~~Estimate~~ Provision will be made for the balance from the Reserve Fund next year.

W.B.

I do not think that the Govt. require any observation to be prepared for the proposed opinion.

W

* G.O. 3796
22. Dec. 63.

66

To The Supt. Engr. 6 Drgs. & Hotel Report & 1 Sketch
" Accountt. Genl.
" Controller & Retd. of P.W. Accounts
Retd. Civil & Mil. & Railway Engr. - 13th April -

282. 283

1864 Depto
Rec: of Govt. for the
No. 1030
Rec: of the Allgood
12 April 64
Per Ch 896/64
Per Cer. 4912 of 186
No. 4891/64
Per Ch 516/65
Estimate of Rs
4,000 for rebuilding
the portions of the
lower Colwood
Aniceut & Bridge
Jaigore Depto. as he
Ld in Decr/63
Sanctioned.

2. 15th April 1864 - A. 65