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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. <u>1953</u>	Press <u>Mis.</u>
<u>28-2-67</u>	
Dated <u>2-7-1867</u>	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
2nd July 1867.*

No. 28. Read the following letter from the Consulting Engineer, Irrigation and Canal Company, to the Secretary to Government, Public Works Department, dated Madras, 14th June 1867, No. 32:—

2 Letters in original from Agent.
1 Copy of a letter to Agent No. 44.
1 Plan.
1 Estimate.

* From Agent No. 60, 14th May.
To do. „ 44, 16th „
From do. „ 112, 10th instant.
Plan showing site of proposed groyne.

1. I have the honour to submit, for the sanction of Government, an estimate, Rupees 3,060, for the construction of a groyne in connection with the Soonkasala Anicut, the intended object of which is to clear away and prevent the re-accumulation of silt in the bay above the head sluice. The correspondence* and plan as per margin are enclosed.

2. I do not anticipate that the groyne will prove very effective, but it appears from the Chief Engineer's second letter that the work had been carried on in anticipation of sanction, until stopped by the freshes on the 11th May. This was not according to rule, and, if the Chief Engineer considered it necessary to construct the groyne as an emergent work, he should have mentioned that such was being done, in his letter forwarding the estimate. My letter, No. 44, of the 16th ultimo, was written on the supposition that the groyne could not be commenced this season, and that, therefore, there was time to consider how the desired object, the removal of the silt, could be best attained.

No. 29. ORDER THEREON, 2nd July 1867, No. 1,953.

IRRIGATION, No. 2.

1. The Government are not of opinion that the groyne which the Company's Officers propose to construct in front of the Soonkasala Anicut will effect the object in view. The action of a groyne of the length, and in the position indicated on the plan, would not, it is believed, cause the draft towards the under-sluices to be sufficiently deflected towards the head of the canal to affect in any appreciable degree the tendency of the stream to deposit silt in that locality. Perhaps a groyne formed as shown in Captain Mullin's sketch might answer the purpose better, but there would be danger of its so masking the under-sluices as greatly to weaken, if not entirely to nullify, their influence.

2. Under these circumstances the Government are unwilling to sanction the estimate for a groyne, as now submitted, but they authorize the Consulting Engineer to pass the expenditure already incurred on the work, and they desire that the subject of devising means of keeping the entrance of the canal clear may be more fully considered after the subsidence of the present freshes, when the effect of the work done this year may probably help to guide to a decision.

(True Extract.)

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

To the Consulting Engineer, Irrigation and Canal Company, with five enclosures.
„ Manager for do. do

Exd. T. Cartledge.

*not quite sure that this will be impracticable,
though I am not on the other hand sure of its feasibility*

Consulting Engineer's Office
Irrigation Canal Company
Madras, 16th May 1867.

N^o 44.

From,

Captain J. Mullins R.E.

To, Consulting Engineer M.C.C.

The Agent & Manager for M.C.C.

Sir,

In acknowledging the receipt of your letter N^o 60 of the 14th instant, transmitting the correspondence and enclosures as per margin, I have the honor to request that you will be good enough to ask the Chief Engineer to reconsider the proposal for the construction of a groynes in the manner estimated for:-

1. Plan
Estimate for proposed
groynes at Somasula
amounting to Rs. 3060-0-0

2. My impression is that the groyne would have no effect whatever on the bed of silt in front of the Head Sluice, and that the only result of its construction would be the diversion of the deep channel, to the smallest possible extent which would suffice to pass the water to the undersluices.

3. It would be very desirable, if such can be done at a moderate expense, to construct a work which would have the effect of preventing the silting up of the bay above the head sluice, and I am not quite sure that this will be impracticable, though I am not on the other hand sure of its feasibility.

If however there be, to the north of the present deep channel leading to the undersluices, and 250 to 350 yards upstream from these sluices, moderately elevated rocks, say 4 to 6 feet above the undersluice sills, and if thence in a direction towards the headsluice suitable rock foundations can be obtained, it would be a good, and probably fully effective, plan to construct a training wall, which would throw a considerable proportion of the water at all times, and all when the river was low directly up to the headsluice whence all not required to be admitted to the Canal would find its way to the undersluices, and so carry away the silt now found inconvenient, and prevent the formation of any future deposit at points which would interfere with the supply of the Canal.

4. In fixing upon the direction of such a training wall care would have to be taken to prevent it acting as a groynes, and throwing the stream in high freshes against the embankments on the right bank of the river which protect the headworks, and the more gently the diversion of the stream is effected, and the more parallel to the general direction of the river bank the stream is carried down to the headsluice, the better. The training wall would terminate about 50 yards above

Four feet would be perhaps the minimum height for the training wall that would be effective, looking to the level of the headsluice sill and 6 feet would be the maximum which would be allowable so as not to interfere too much with the water after the freshes had receded a high level.

3 feet above undersluice he found necessary to connect A.C. so as to prevent too much of the stream finding its way down to and then along the face of the sluices. Silt would perhaps suffice for the wall A.C.

above the headsluice. The enclosed trace from one of the old general plans of the River in which I have approximately corrected the relative position of the head and undersluices and shown, A.B, the direction which a training wall would take may serve to explain my views. It may

be found necessary to connect A.C. so as to prevent too much of the stream finding its way down to and then along the face of the sluices. Should the circumstances of the river bed render the construction of a training wall at a moderate cost impracticable, I would recommend the trial of the following plan whereby the silt may, I think, be cleared away at a very small cost.

Cut a 3 yards channel up from the headsluice to a point on the deep channel in the neighbourhood of A on the trace, then throw a rough stone dam across the deep channel raising it sufficiently to divert a part of the water down the cut. Next employ a small party of coolies to loosen the silt, and get it carried down by the water through the undersluices. As the cut becomes thus enlarged, raise the rough stone bund, and turn more and more water down. In this way I hope the whole of the silt, or as much as may be required to be removed, will be cleared away at a very trifling cost.

The rough stone of the ring bund would be available.

Of the cost. I have repeatedly made use of similar arrangements, and the results have always been satisfactory. —

6. Of course the plan just alluded to would be of only temporary advantage, but on the other hand I believe that when the Main Canal comes to be fully supplied, there will be but little accumulation of silt near the head sluice, while the quantity carried into the channel will always, whatever arrangements may be made for regulating the head of the river, depend upon the amount that is in suspension by the water, and not to any appreciable extent upon any disturbance of deposits at above the head sluice. — In order to reduce to a minimum the silt carried into the Canal by its supply, it will be necessary to keep that supply low at the commencement of freshes when the flood waters are usually highly charged with alluvial matter. —

I have been
Signed J. C. Mullins, (Capt. R. E.)
Counselor for S. H. Company.
(true copy)

John Mullins, Captain, R. E.
Counselor for S. H. Company.

mate. My letter, of the 16th ultimo,

Enclosure in letter No.
32 of 14 June 1867 to Govt.
from Engr. Office, NCC.

882249/67

Concerning for S.H. Company.

Enc. 8-

No 32

2 letters in orig.

from Govt.

Copy of a letter

to Govt. 11-4-4.

Plan

estimate

From

Captain John Mullins R.E.

Consulting Engineer Sand & Co.

To

Colonel C. A. O. R.E.

Secretary to Government P.W.D.

Sir

I have the honor to submit for the sanction of Government an Estimate, Rupees 3060, for the construction of a groin in connection with the Doonkasala Anicut, the intended object of which is to clear away and prevent the reaccumulation of silt in the bay above the Head Sluice. The correspondence and plan

* from Govt. 11-60-14 Aug.

To do 14-16

From do 112-10

Plan showing site of proposed groin.

I do not anticipate that the groin will prove very effective, but it appears from the Chief Engineer's second letter that the work had been carried on, in anticipation of sanction, until stopped by the freshes on the 11th May - This was not according to rule and, if the Chief Engineer considered it necessary to construct the groin as an emergent work, he should have mentioned that such was being done in his letter forwarding the estimate. My letter, No 14, of the 16th ultimo,

was

2.27.1867-
June 1867 or 19th

*Copy to
Public Works Department*

Public Works Department.

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the

Read the following

From the Consulting Engineer

J. H. Company

(Here enter No. 32)

dated 14 June 1867

I do not think that the fact that the work has commenced irregularly is a reason to spend more money on it. The Committee of the Sec Engineer & the Sec Engineer are divided in opinion that the work will be unhelpful.

The Consulting Engineer for the M. S. T. L. - Manager Do - Do

As the work referred to in this letter has been partly carried out, the Government have no option but to sanction the estimate of Rupees 3,000 submitted by the Consulting Engineer of the Madras Irrigation Canal Company, but they are of opinion that the measures proposed by the Chief Engineer are not likely to be successful in preventing the re-accumulation of silt in the bay above the Head Sluice of the Sornkasala Ament -

[Signature]

Dr. J. H. Co. 13

No. 1953

Public Works Department.

1953

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 2nd July 1867

Read the following

From the Consulting Engineer J. H. Co.

(Here enter No. 32 dated 14 June 1867)

*N
W*

The Government are not of opinion that the groynes which the Company's Officers propose to construct in front of the Sornkasala Sluice will effect the object in view. The action of a groyne of the length, and in the position indicated on the plan, would not, it is believed, cause the draft towards the under sluices to be sufficiently deflected towards the head of the Canal to affect, in any appreciable degree, the tendency of the stream to deposit silt in that locality.

Perhaps

done this year may probably help to guide to a decision.

W.B.

Perhaps a groynes formed as shown on Captain Mullin's sketch might answer the purpose better, but there would be danger of its so masking the under sluices as greatly to weaken, if not entirely to nullify, their influence.

Under these circumstances the Govt are unwilling to sanction the estimate for a groyne as now submitted, but they authorize the Consulting Engineer to pass the expenditure already incurred on the work, and they desire that the subject of devising means of keeping the entrance of the canal clear may be more fully considered after the subsidence of the present freshes, when the effect of the work done

4 To the Comdg Engr & Comd'g with five enclosures.
4 " " Manager to do.

Recd 23/7/67

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J

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P. W. 1867. Department.
Proc: of Govt for Enby
No. 1953

PROCEEDINGS OF GOVERNMENT *Madras*

Dated *2^d July 1867*

*Putting orders on a
letter from the Consulting Engr.
for the Madras Irrigation &
Canal Company submitting
an Estimate of Rs. 3060 for
the construction of a groyne in
front of the Sonthasala. Inland.*

L. 28-29