

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	1570	Press
B.P. No.		Mis. _____
Dated	3 - 6 - 1955	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
3rd June 1875.*

No. 81. Read the following endorsement of the Officiating Chief Engineer, dated Ootacamund, 20th May 1875, No. 542:—

From Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Guindy, 13th May 1875, No. 531.

YOUR memorandum, No. 246, dated 24th February 1875.

In forwarding copy of a letter from the Executive Engineer, Mount Range, I have the honor to observe it more than confirms our surmise as to the state of affairs at the anicut.

1 Copy of letter from the Executive Engineer, Mount Range, No. 281, dated 6th May 1875.
1 Sketch (to be returned).

2. As no other remedy seems to me better than that suggested by Captain A. C. Smith, I have instructed him to push on with it.

From Captain A. C. SMITH, R.E., Executive Engineer, No. 2, or Mount Range, to Colonel F. J. MOBERLY, R.E., Superintending Engineer, Chingleput, dated Chingleput, 6th May 1875, No. 281.

I HAVE the honor to report that, on the 14th and 15th ultimo, I again inspected the foundations of the Thamarapaukum anicut.

One Sketch.

2. This report has been delayed on account of the sketch, which it was impossible to complete as I found the north end of the ring-bund (in the same way that the south end did) covered up some of the damaged portion, and I ordered the Supervisor to turn it over and examine the hidden foundations before making his sketch, which he accordingly did.

3. The sketch will show you the state of the work and my proposals for restoring it.

4. I found the whole of the outer or front row of wells for a length of 135½ feet had entirely broken up, and in their stead mixed up with the sand of the river bed. I found lumps of masonry and remnants of concrete that had never set. The wells were evidently built in cubes the cubes being allowed to set individually and then afterwards placed together and sunk, the mortar joining the cubes never set, nor did any of the concrete used for filling the wells. The result is a horrible mixture of debris which, owing to excess of water, it is impossible to clear away, and therefore impossible to sink wells upon.

5. The water rushes in through the anicut apron from the down stream side directly we bale out to 3 feet below water level on that side; this rush of water will be very tiresome to work in and would be most costly to prevent. I therefore propose commencing a row of wells, as shown in plan, in front and clear of the objectionable remnants; there will not be much difficulty in sinking these; on them a retaining wall will then be constructed.

6. The space thus enclosed will be partitioned off, two partitions at a time, one at each end of the work, and a quantity of hydraulic concrete (experiments as to the best constituent parts for which I am now making at the work site) sufficient to fill both partitions, allowing a depth of 4 feet, will be prepared, and as soon as the partitions are cleared and baled as far as possible, clearing and baling will cease, the concrete be thrown in rapidly and trodden and rammed immediately, so as to prevent the water from re-entering and occasioning a wash through the mass.

7. As soon as this has partially set the planking will be moved further in and a fresh lot of concrete made, and so on until the whole space between old interior and new exterior wells is filled with a solid mass of concrete.

8. I see no other way of proceeding.

9. The state of the work confirms my view of the cause of subsidence as reported in my No. 2,943, dated 15th February 1875, the only thing is that instead of finding the wells sunk bodily and perpendicularly downwards fragments only are found, as they were all disjointed.

10. Several of these cubes were found in rear of the apron, but none along the face of the

Proceedings of the Madras Government, Public Works Department,
3rd June 1875.

work nor near the head sluices, where they would undoubtedly have been washed had there been a scour along the face of the work.

11. I am certain that a sensibly moving current of saturated sand was undermining the work from front to rear, and that supposing the whole of the foundations are in a similar condition any part of the anicut may fall at any time a very high fresh occurs.

12. It is a question of expediency whether to sink a protecting row of wells all along the face of the work or to wait until another bad spot declares itself.

SUBMITTED for the information of Government.

The report of the Mount Range Officer on the Thamarapaukum anicut across the Cortiliar shows that the original work, which was constructed by a Contractor under the supervision of the late Captain Magnay, was very badly done, the cementing material used being quite unfitted for hydraulic work.

2. The undersigned does not altogether concur with Captain A. C. Smith as to the cause of the damage. Had the bed of the river below the anicut been in motion to such an extent as to cause so extensive a settlement of the foundations of the crest wall, it is very improbable that the aprons would have remained undisturbed. There must, it is thought, have been scour above the anicut, and the apron on this side, stated in the Inspection Memorandum of the 19th April 1875, to be necessary as a protection, should be added. It will be desirable to examine the foundations of the crest wall on either side of the damaged part, which can be done sufficiently to ascertain whether the tops of the wells and the bottom of the masonry foundation are in contact without much trouble or difficulty, and underpinning should be carried out wherever necessary.

3. The arrangements for reconstructing the destroyed foundations, proposed by Captain Smith, are approved, but the new wells should be carried down to, and 6 inches into, the underlying clay, or to 21 feet below the anicut crest level should clay not be met with at a higher level.

4. An estimate, which will be chargeable to Revenue, should be prepared and submitted as soon as possible.

(Signed) JOHN MULLINS, Lieut.-Colonel R.E.,
Offg. Chief Engineer, P.W.D.

No. 82. ORDER THEREON, 3rd June 1875, No. 1,560.

IRRIGATION, No. 6.

ORDERED to be recorded.

The Government have learnt with much regret that the Thamarapaukum anicut across the Cortiliar, at the head of the Cholaveram tank supply-channel, was constructed in the first instance with improper materials, and that doubts are entertained consequently of the stability of that part of the work which is apparently uninjured.

(True Extract.)

Major, R.E.,

Offg. Joint Secretary to Government.

To the Superintending Engineer, Chingleput.
,, Chief Engineer for Irrigation.

Exd S. T. Austin.
Spare Copies

3a 14

No 542

Submitted for the information
of Government.

The report of the Mount Range Officer on the Thamarapaukum anicut across the Cortiliar shows that the original work, which was constructed by a Contractor under the supervision of the late Captain Magnay, was very badly done, the cementing material used being quite unfitted for hydraulic work.

2. The undersigned does not altogether concur with Captain A. C. Smith as to the cause of the damage. Had the bed of the river below the anicut been in motion to such an extent as to cause so extensive a settlement of the foundations of the crest wall, it is very improbable that the aprons would have remained undisturbed. There must, it is thought, have been scour

scour above the anicut, and the apron on this side, stated in the Inspection Memorandum of the 19th April 1875, be necessary as a protection, should be added. It will be desirable to examine the foundations of the crest wall on either side of the damaged part which can be done sufficiently to ascertain whether the tops of the wells and the bottom of the masonry foundation are in contact without much trouble or difficulty, and underpinning should be carried out wherever necessary.

3. The arrangements for reconstructing the destroyed foundations, proposed by Captain Smith, are approved, but the new wells should be carried down to, and 6 inches into, the underlying clay, or to 21 feet below the anicut crest level should clay not be met with at a higher level.

an

5a 5
4. An estimate, which will be chargeable to Revenue, should be prepared and submitted as soon as possible.

Colacamund
20th May 1875

W. H. Mullins Secy. Col. C.
Off. Chief Engineer
S.H.C.

To: The Secretary to Government
Public Works Department

P. W. 1875 dep
No: 3524

From

The Chief Engr. for
Irrigation

Dated 20th May 1875
Recd. 29th — 1875.

G.S. No: 542

Submitting with re-
marks, letter from the
Supt. Engr., Chingleput
intimating that he has
instructed Capt. Smith
to push on with the
Thamardpaukine
Ancient works.

B. No: 156. 9-6-75

72
O. B. Kleft
Secy of the Madras Government
Read the following.

the Chief Engineer } (H.S. No 542 dt 20 May/75.
for Irrigation }

G.O. No. 1560 of 30 June/75
Ordered to be re-
-corded.

The Government
have learnt with much
regret that the Thamara
paukine across
the Costlier, at the
head of the Cholavaram
Tank supply Channel,
was constructed in
the first instance
with improper mate-
rials, and that doubts
are entertained con-
sequently of the sta-
bility of that part
of

of the work which is
apparently uninjured.

by 21/5/75

ASCC.

9a

Proposed at
Helm...

The Suppl. by Chinglet ✓ with sketch
Chinglet for Dr. with 2 Encls
SC Decd - 14-6-75
S.S. Chinglet
Chinglet for Dr.

1281-82

3524

Govt. of 1875 Madras.

PUBLIC WORKS.

To

The Supergr
Chingleput

Dated

Issued

Recd.

Encl.

G. O. D. No. 15-10

Nos. 8/-82

Thamapaukum Ancient Works,
Chingleput. — Letter of the Chief
Engineer for Irrigation, submitted
with remarks, letter from the
Superintending Engineer, Ching-
leput, intimating that he
has instructed Capt. Smith
to push on with the —,
recorded with remarks.