

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.	801	Press <u>Mis</u>
<i>L. 19-500</i> Dated	27-3-	1868

Not to be folded or roughly handled

*Proceedings of the Madras Government, Revenue Department,
27th March 1868.*

No. 499. Read the following Proceedings of the Madras Government in the
Public Works Department :—

Passing orders on report upon the works in }
progress at the south branch of the Lower } (Here enter 20th March 1868, No. 902.)
Coleroon Anicut in Tanjore District.

No. 500. ORDER THEREON, 27th March 1868, No. 801.

Irrigation, No. 7.

Communicated to the Revenue
Board.

(True Extract.)

(Signed) F. BRANDT,

Under Secretary to Government.

To the Board of Revenue, with Proceedings Public Works Department, No. 902.

*Proceedings of the Madras Government, Public Works Department,
20th March 1868.*

No. 427. Read the following letter from the Superintending Engineer, 6th Division, to the Secretary to Government, Department Public Works, dated Yalunthoppo, 6th March 1868, No. 1,710:—

1. I have the honor to report upon the Lower Anicut works, &c., which I have recently inspected.

2. Owing to the rain in January and the floods in the river reported on the 6th ultimo, it has been found possible to resume work in the river bed only within the last ten days, the permanent parapets of the bridge have, however, been constructed and plastered this season.

3. Of the extended apron and retaining wall 658 feet 2 inches have been completed, and 623 feet 6 inches remain to be constructed, exclusive of the returns round the extended aprons of two sluices, and this work, it is anticipated, will be completed this season.

4. With reference to the defects in the apron, adverted to in letter No. 879,* In G. O. No. 2,960, 24th September 1867. I had a number of holes opened in the apron, and found no hollows below the apron except opposite to arches nine to twelve, from the south end, or within a length of about 150 feet, portions of the apron were covered with rough stone recently removed from the river bed, and my examination of the apron was not so complete as I could have wished; but there is every reason to believe that only about 150 feet of the old apron will have to be taken up and relaid, and for this only Rupees 1,500 or 2,000 will be required, instead of Rupees 18,000 as provided in the Budget. The estimate for this work will be submitted after my next visit to the anicut, as the apron cannot be relaid till the new rear retaining wall has been got in, for, in putting it in, it is probable that the apron will be more or less undermined.

5. Mr. Bateman assures me that there was a hollow under the apron opposite to the 12, 13, and 14 arches, from the north end of the south branch, last season, and that in one or two places where the apron had sunk a little, he took up some of the stones and filled the hollow just before the floods put a stop to the work last season; though several stones have been taken up in this portion of the apron, there is not now the smallest indication of the washing away or settlement of the sand under the apron. Arches 12 to 14 are the second sluice arch, and the two southern arches of the second section of the bridge and opposite to them the new deep retaining wall has been completed; it would appear, therefore, that the new solid retaining wall has had the effect of stopping porosity and so through the old work, and that any small hollows under the work will probably be filled up by sand driven into them by the pressure of the water

Paragraph 2 of letter in G. O. No. 879, 13th September 1867.

on the river bed above, or to the west of the anicut, as soon as the new solid rear retaining wall has been completed. Under these circumstances, it is worthy of consideration whether it would be well to build the front solid retaining wall proposed in the letter embodied in G. O., No. 3,285 of 1866, and provided for in the estimate of Rupees 70,400, the more so as the excavations made for this front retaining wall, which is to be carried down to the level on which the piers stand,

No. 171, Budget of 1867-68.

it is probable that the flooring under the arches of the bridge may be undermined even if the foundations of the piers and the retaining wall are not disturbed, and if this wall prevents percolation, as the lower or rear retaining wall appears to do, there will be no prospect of any of the small hollows, which may be formed while getting in the deep foundations, being filled up. It has been proposed that the front retaining wall shall be 12 feet beyond the existing retaining wall and the upper side of the bridge piers; deep excavations so near the bridge which rests only on well foundations, would be very apt to disturb such foundations, and if the front retaining wall is to be put in at all it would be well to place it at least 24 feet from the ends of the piers, so that there may be room for the formation of a species of coffer dam, by means of a double row of piles and planks filled in with clay, to prevent the foundations of the existing work from being disturbed while the front retaining wall is being got in; this will only add about Rupees 3,000 to the cost of the work.

6. The groynes thrown up last year and the excavation through the shoal of sand from the south bank below the south branch of the ancient have acted well, and while the sand bank has been much reduced, the deep channel, which hugged the north bank, has in great measure been filled up, and the deep stream in rear of and parallel to the apron has shoaled and is somewhat further from the work than it formerly was. I apprehend no danger from this stream, but as the tendency of the groyne is to fill up the deep stream formed below the ancient by the water which has poured through the successive branches in the ancient, I purpose to allow the groyne to stand for another year, and also the front embankment above the portion of the dam which was completed last year. Flood waters being allowed to pass

* From north side.

freely through the first set of sluices and over the ancient into the portion of the river, which has for the last two seasons been banked off, to admit of silt, &c., being deposited in this portion of the bed which is still very low. By means of a groyne lower down the river on the north side, and two groynes on the south side, it is proposed still further to check the scouring in the deep stream and to divert the current more into mid-stream, when it is hoped that the bed of the river near the ancient will shoal and rise to within a few inches of the level of the rear apron, as it is in rear of the north branch of the ancient, instead of being about three feet below it as at present.

7. The river bed above the head of the island has altered in some respects since last year. The main current or set of the river is still on the north side, or into the north branch of the river, but two of the calagams or channels across the nose of the island have become shoaled, and it was found necessary, when the water fell last season, to cut a channel from the deep stream on the north side to the head of the South Rajah Voikal; it is now proposed to place a bank across this stream, and also to embark across the shoal in continuation of the nose of the island, to divert any small fresh into the north branch of the river; this was done last year, but the early fresh in May overtopped the banks, and Government in G. O.

† 23rd May.

No. 1,569,† expressed their displeasure at what appeared to be a want of foresight on the part of Mr. Bateman, and of the local controlling authority in not

constructing a temporary dam across the south branch of the river. I would observe that the subject was duly considered with reference to passed experiences, and it was determined not to place a bank across the south branch of the river, for it was known that if three feet or four feet of water stood against any such temporary bank, the percolation in the bed and through the old work would at once put a stop to the foundations which were being laid 10 or more feet below the level of the bed of the river. I would also observe that Government in paragraph 2 of

* 18th May 1867.

G. O., No. 1,504,* approved of Colonel O'Connell's ordering four inches of clay

to be spread over the sand exposed in the bed of the river above the ancient, by the excavations made for the purpose of obtaining material for the banks to enclose portions of the river bed in which the rear retaining wall was to be constructed.

8. Were the river bed above the ancient covered with a deposit of clay, it would be well not to disturb it and not to expose the sand in the bed, but as there is a belt of sand immediately above the ancient, exposed to the pressure of the water, and as the draught by the sluices is intended to carry away deposit and the sand is thus exposed, it appears to be an unnecessary precaution to prevent material from being obtained for the front embankments from the bed of the river, and as earth would have to be brought from a long distance for this embankment, and much delay would be occasioned thereby, I have authorized Mr. Bateman's obtaining material from the river bed at a distance of fifty yards above the ancient.

9. The north branch of the ancient appeared to be in good order, but will require the ordinary pointing, &c., the lower apron is still under water, and I was, therefore, unable to examine it. Above the north branch of the ancient there is a considerable draught to the north bank by the Vadavair and North Rajah Voikal, and from their heads a stream runs through the shoal above the ancient to the northern sluice, and thence along the face of the ancient to the other sluices; before the sluices there is an extended apron 21 feet broad, and I purpose, next year, to throw out wings over the retaining walls below these aprons to prevent the current hugging the ancient, if direct streams to the sluices cannot be made and maintained through the shoal by the draught through the sluices. Similar wings should be supplied to the sluices in the south branch, particularly if the front retaining wall is not to be built; to the northern sluices I have already provided them, though not included in the original estimate. Such wings have been provided for the sluices in the Upper Ancient, and have been found to be very effective in preventing a deep channel from being formed along the face of the work.

10. The foundations of the wing of the Kammakki-Manniyair, for which Rupees 839 were sanctioned in G. O.† No. 3,379, were being excavated, and I have allotted Rupees 509 from "Minor New Works" for this work in 1867-68 in anticipation of the sanction of Government, as it would be well to have the work completed at an early date. The original foundations were only 2½ feet below the floor of the sluice, and the buttresses were carried up only 2½ or 3 feet above that level, while the section of the wall was far too slight to resist the pressure against it. I am having two buttresses put in to support the opposite wing wall, which is also too slight, the buttresses, however, may save it.

† 22nd October.

Proceedings of the Madras Government, Public Works Department.
20th March 1868.

No. 428.

ORDER THEREON, 20th March 1868, No. 902.

IRRIGATION, No. 18.

1. The Government observe from the foregoing report on the works in progress at the south branch of the Lower Coleroon Anicut that, notwithstanding the delay caused by the late rains, there is every probability of their being completed this season, and His Excellency in Council is glad to learn that the condition of the apron of the anicut is better than the Superintending Engineer was led to believe from his inspection of it in September last. Captain Oakes is now of opinion that the effect of the new solid rear retaining wall will be not only to prevent damage by the percolation of water under the anicut, but also to cause such hollows as may exist to be speedily filled up. Under these circumstances it is doubtful whether it will be necessary to add the advanced front solid retaining wall which has been provided for in the estimate forming No. 171 of the current year's Budget, and the more so as Captain Oakes fears that the addition could not be made without disturbing, in some degree, the foundations of the anicut, and risking injury to that work. As the new rear retaining wall and extended apron will probably afford all the stability to the anicut which is required to make it secure, the Government concur with Captain Oakes in considering that the additional front retaining wall and apron may not be required, and they accordingly authorize the construction of those works being deferred till it can be seen whether they cannot be dispensed with.

2. Captain Oakes reports that the cut which was made last year through the bank of sand on the down stream side of the anicut, with the assistance of a groyne to divert the water into it, has had the best effect, and he suggests measures for further improving and equalizing the level of the bed of the river both above and below the anicut. These appear to be judicious, and are approved of, as well as the construction of wings between the sluices in the northern branch, to check the tendency of the stream to form lateral currents along the face of the work.

(True Extract.)

Colonel, R. E.,

Secretary to Government.

To the Superintending Engineer, 6th Division
Controller of Public Works Accounts

005-4674
00546674P

Dec. 1868. Oct 17
Proc of Court for all work
No. 919.

Proceedings of the
Court. Sept. 1868.

Noted 20: 3
Received 21st 1868

Major

Major of 1868

Referring to the
the report upon the
work in the prison
at the Court house
of the Governor of
Louisiana and the
School
with the order

8-801

Louis P. Kelle
Revenue Board

27-3-1868

Major 8th. 1868 with No. 179 2nd 902. 1868 179 2