

MADRAS RECORD OFFICE.

Government of Madras.

Revenue DEPARTMENT.

G.O. No.

893

Press
Mis.

209-10

Dated 17-6-1870

12

Not to be folded or roughly handled

No. 209. Read the following Proceedings of the Board of Revenue, dated 21st May 1870, No. 3,475:—

Read the following letter from the Acting Collector of Trichinopoly, to the Acting Secretary to the Board of Revenue, dated 28th April 1870, No. 86.

With reference to the Proceedings of the Board under date the 25th January, No. 520, calling upon me to report with reference to paragraph 6 of the Order of Government, 24th November 1869, No. 3,739, regarding the breaching of the Appanullur and Pilloor Tanks in this district in the past season, I have the honour to state as follows:—

First as regards the Appanullur Tank. The sluice belonging to this tank was so far back as ten years since reported to be silted up and useless, and in the year 1861 an estimate for a new sluice costing Rupees 470 was sanctioned and ordered to be carried out. The work was, however, never executed, and there can be but little doubt that, seeing the hopelessness of getting the work done, the villagers have themselves made an opening in the bund as the only means of irrigating their lands. It has also been ascertained that, in July 1868, when a breach had occurred in the tank, the matter was examined into, and the existence of the cut reported to the Executive officer in charge of the Range. Again, however, nothing was done for the repair of the tank, and under these circumstances I submit that the villagers (and who themselves must have been the principal sufferers) cannot fairly be held responsible for the loss.

2. With regard to the bursting of the Pilloor Tank, there is nothing positively to show that the breach was caused by the existence of a pot-sluice, and which had been inserted for the supply of 3 Acres only; this sluice it would appear, moreover, had been closed, for according to the report of last inspection made by the Supervisor he had not seen or noticed it. At this distance of time it is of course very difficult to form a correct opinion as to the exact cause of the breach, but in my judgment the aperture of a pot-sluice, and which supplied only 3 Acres, must have been so small as scarcely in itself to have accounted for a breach of such magnitude, and that the more probable cause was, as pointed out by Captain Oakes himself, that the breach was mainly caused by the bursting of several small tanks situated above the Pilloor Tank.

SUBMITTED to Government, with reference to paragraph 6, Government Order, 24th November 1869, No. 3,739, Public Works Department.

2. The Collector's report shows that the villagers are not so much to be blamed as the Government supposed for the damage to the Appanullur and Pilloor Tanks.

No. 210. ORDER THEREON, 17th June 1870, No. 893.

Irrigation, No. 2.

COMMUNICATED to the Public Works Department, with reference to the Order in that department under date 24th November 1869, No. 3,739, paragraph 6.

(True Extract.)

(Signed) R. S. ELLIS,
Chief Secretary.

To the Public Works Department.
,, the Board of Revenue.

Exd. E. C. Shunker.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 25th January 1870.

Read the following Proceedings of the Madras Government, dated 7th December 1869, No. 14,
Revenue Department:—

Read the following Proceedings of the Madras Government, dated 24th November 1869, No. 3,739,
Public Works Department.

Read the following papers:—

No. 479. From the Superintending Engineer, 6th Division, to the Secretary to Government,
Public Works Department, dated Camp at Manapalai, 14th September 1869, No. 679.

I HAVE the honour to report upon the floods in the Cauvery during the present season, and upon the effects of the rain-fall in the Trichinopoly District.

2. There was no early fresh in the Cauvery this year. The water first rose above both branches of the anicut on the 29th June; it rose to seven feet seven inches on the Cauvery gauge on the 2nd July, but fell to four feet six inches on the 16th; it rose again to seven feet eleven inches on the 19th, to eight feet nine inches on the 20th, and was above nine feet from the 21st to the 26th when it was eight feet eleven inches, the highest flood being nine feet seven inches on the 23rd and 24th. The flood was therefore rather below the average height; but, owing to the continuance of the flood above nine feet for five days consecutively, the water in the eastern parts of the delta rose to an equivalent to an ordinary flood of about ten feet.

3. The statement in the margin shows that the supply of water in July and August has been very good, especially in August, and the delta has received an ample supply.

Height above Cauvery Dam	Flood of 1869.	Average of twenty years.
	Days in July	Days
10 feet.	...	2
9 "	5	3
8 "	7	6
7 "	12	10
6 "	19	17
5 "	26	24
4 "	31	29
	August.	
9 "	...	2
8 "	8	5
7 "	10	8
6 "	26	20
5 "	31	23

4. With such floods the main rivers ought to have been safe, and so they may be said to have proved to be, though two small breaches occurred, one in the Codamoorty, which is stated to have been due to leakage under the foundations of the Ombathivelli sluice, the body of which was built in Kudimaramut on old foundations in 1862. Another sluice in the neighbourhood, viz., that of Condamungalum, which was also re-built in Kudimaramut on old foundations in 1862, has had to be closed owing to a leak appearing in it. Arrangements have been made for the supply of the lands dependent on these sluices during the present season from the Varagaloor sluice which is higher up the river, and can therefore command the lands. The breach was closed at a cost of Rupees 162, and no damage was done by the water which escaped.

5. The other breach occurred in the Velappaur, a branch of the Codamoorty, in the Veedevedungum limits; this was due to a leak in the embankment formed last year in closing a breach at the same locality, which was closed in Kudimaramut, as the breach was due to a maday or cut made by the villagers without any authority. The cost of closing the breach was only 82 rupees.

6. The only breach which has caused any injury is one in the Senkalapuram surplus channel; this is a small surplus which has an open mouth into the Velappaur; a breach occurred in this channel on the 3rd July when there was but a low flood in the river, and was said to be due to the backing up of the water from the Velappaur. As, however, the Range Officer had passed over the bank only a few days previously and could not but have observed any low spot in the bank, there is reason to believe that the Range Officer's conjecture that the breach was not accidental but that

Approved and signed by the Secretary to Government,
Public Works Department, dated 25th January 1870.

THE PUBLIC WORKS DEPARTMENT,

TRICHINOPOLY.

O. O. 17th June 1870, No. 679.

Dated June, 17th.

THE PUBLIC WORKS DEPARTMENT,

TRICHINOPOLY.

GOVT. OF INDIA

it was made to admit of water passing over and fertilizing the Perumpaniyoor lands is correct, and this the more, as for the last nine years, 1867-68 excepted, breaches have occurred in banks which would flood the Perumpaniyoor lands which are for the most part the property of a wealthy Mirassidar. The Velappaur banks have been so raised and strengthened this year that there could have been no doubt that water did not pass over them, and so it is believed a cut was made in the Senkalapuram surplus bank to flood and fertilize the lands in the neighbourhood. The breach was closed for Rupees 123, but opened afresh on the 26th July, and was not closed till the 4th August at a cost of Rupees 440. The second breach has caused two breaches in road No. 35*

* From Trivalore to Myaveram.

† No. 501, dated 20th July.

which crosses the drainage of the delta. The occurrence of the breach on the 3rd July was reported† to the Collector who is doubtless making the necessary inquiries relative to it.

7. In addition to the above there have been a few petty breaches in minor channels which have not been brought specially to my notice.

8. I am only surprised that more breaches have not occurred, for the villagers have now ceased even to look to the bandy, cattle, and foot-tracks over the river and channel banks; and, though I invariably call the attention of Tahsildars to these spots before the high floods, no notice is taken of my orders, unless specific spots are brought to their notice; of this, I have informed the Collector. The danger to the river banks from these crossings, &c., may be judged from the fact that, on the 20th of July, just before the high floods, I observed that the Cauvery bank which has lately been repaired, and the average height of which is from five feet to seven feet above the water level, as it stood on the 20th, was only one foot above the water level at a crossing to a plantain garden on the Padugay; had I not observed this, a breach must have occurred here, and as the water level was from five to five-and-a-half feet above the adjacent country, the consequences of a breach would have been very disastrous, and it might have been found impossible to close the breach during the whole season. This has also been brought to the notice of the Collector.

9. During the month of August heavy rain has fallen in the western portion of the Trichinopoly District, and the following tanks have been breached in the Museri and Kulitalai Talooks.

10. *Appenanellore Tank.*—The breach in this tank is due to the formation of a temporary sluice in the bank adjacent to the surplus calingulah by the villagers; the permanent sluice having, it is stated, become choked, no intimation of this fact was, however, made to this department; the closing of the breach and repairing the portion of the calingulah which has been injured will cost Rupees 640, and this, I have informed the Collector, I am of opinion the people ought to be called upon to pay. By the breaching of the Appenanellore tank, the Kalacoody† tank which receives the drainage of the former has been breached and its surplus weir has been injured. An estimate of Rupees 910 provides for the repair of this tank.

Acres.	Assessment.	Average Revenue for five years.
Museri Talook ...	Rs. 1,122	1,410

11. *Pilloor Tank.*—This tank was reported to have been breached owing to the breaching of several small tanks, the property of private individuals, above it. It appears however that the tank breached before water passed over its surplus weir, and the breach was due to a pot sluice which the villagers had been directed to close. An estimate of Rupees 720 for repairing the tank was nearly worked out. The estimate chiefly provided for re-building and raising the rough-stone revetment; this has been well executed. The villagers have closed the breach in Kudimaramut. It is stated that after the breach occurred the water rose over the calingulah, owing to the breaching of the tanks above, and there are indications that the water did rise above the calingulah. The surplus from the Pilloor tank passes into the Vadachary tank, which has a surplus weir 140 feet long; when the Pilloor tank breached

two inches of water are said to have been passing over the Vadachary dam, and when it had risen to two-and-a-half over the dam a leak in the bank was observed adjacent to the rough-stone wing of the dam, and as the spot could not be approached, nothing could be done to save the bank, and it was breached. The released waters then passed into the Pooruthairy, an Inam tank, and breached it; from one of the surpluses of this tank the Rachanda Therumalay tank is supplied, and unless the Inam tank is repaired, the latter will not receive any supply this season, but all water passing from the Vadachary tank, the breach in which has been closed, will pass through the Inam tank into the Ariyaur river.

For Rupees 60.

It is possible that, owing to the breaching of the small private tanks above the Pilloor tank, that that tank might have been breached, but as the breach actually occurred before water rose over the calingulah, it is hardly fair to attribute the breaches in the Pilloor tank to the breaching of the small tanks above.

12. The following, therefore, may be said to be the result of the disobedience of the Pilloor Mirassidars:—

- (1.) Loss to themselves of water sufficient for maturing about 100 acres.
- (2.) Cost of closing breach Rupees 30 or 40.
- (3.) Loss to Vadachary villagers of water for 300 acres.
- (4.) Closing breach, Rupees 60.
- (5.) Loss to Pooruthairy, unknown.
- (6.) Loss to Rachanda Therumalay villagers of a supply during the season for their lands (about 50 acres,) unless the Inam tank is repaired, and over this we have no control.

13. Breaches have occurred in the Poothoor tank and in the Nungapuram Cattoovari, which it will cost Rupees 160 and 60 respectively to close. Small breaches have also occurred in other tanks which have been closed in Kudimaramut.

14. I have myself visited the Appenanellore, Kalacoody, Pilloor, and Vadachary tanks, and the Andanur tank which has been very much injured. As this damage is to Salem, the attention of the Superintending Engineer of the 5th Division has been called to it.

No. 635, dated 3rd September 1869.

15. The road between Madura and Trichinopoly has been much injured by the breaching of the Karny colum and the overflow of the Poonangolum tank in the Murungapuri Zemindary. Estimates for repairing these tanks were forwarded to the Collector in September 1868.

16. A large number of small tanks, the property of private individuals, have been breached; these are so numerous in the Kulitalai Talook that it is almost hopeless to attempt to improve the Government tanks, for though provision may be made for the discharge of the ordinary drainage of a valley over the surplus weir of a tank so as to prevent the water rising to a dangerous height, it is impossible to provide for the discharge of water from several tanks in the valley above which may all breach at once, or which may breach one into the other, and may perhaps thus throw the accumulated drainage of half a monsoon at once into a tank; the cost of weirs to provide for such catastrophes would be very great, and it would be most difficult to calculate the length required for them.

No. 283.

NOTE by the Acting Chief Engineer for Irrigation.

In the first three paragraphs of his letter the Superintending Engineer, 6th Division, reports the favourable character of the Cauvery freshes of this year, and I am glad to be able to add that up to the first week in October the water in the river maintained a level at which the supply continued to be considerably in excess of the wants of the cultivation; the freshes it will be seen have throughout the south-west monsoon not reached ten feet on the Cauvery dam gauge, and conse-

quently there has been an almost entire absence of damage to the embankments, either of the Cauvery itself, or of the numerous rivers which directly, or indirectly, are supplied by it.

2. Near the head of the Codamoorty, however, the Ombathivelli sluice, which had been rebuilt by those interested in the irrigation under it some seven years ago, occasioned a small breach, and another sluice built in the same way had to be closed to prevent damage from a leak which showed itself at or under it. It will be better in future to allow no sluices in the banks of main rivers to be thus constructed by the Mirassidars, because the work cannot be effectually controlled, and, though public money may be saved, in the first instance, to the extent of the cost of these works, there is risk of serious loss and damage from their failure. Generally speaking, wherever sluices are really required for existing or new cultivation, they should be built by Public Works Officers on suitable designs, which have been regularly sanctioned; and whenever villagers wish to have sluices, which may not be absolutely necessary, but which would be nevertheless a convenience to a few individuals, such works should be designed and carried out by the proper officers at the expense of the Mirassidars interested.

3. The breach in the Velappaur, referred to in paragraph 5 of Captain Oakes's letter, is one of a class of accident to which the rivers of Tanjore are particularly liable, owing to the practice, which has existed for a long time, of making irrigation cuts in the banks. The custom cannot be stopped without providing efficient and safe means of irrigation, and I have already given instructions to the Superintending Engineer on this point, and he informs me that many sluices to supersede these cuts have recently been constructed. All the sluices still required should be arranged for as soon as possible, and as soon as the necessity for interference with the banks shall have been, in any particular locality, removed; the Mirassidars should be warned that any attempt to open a cut will invariably lead to the prosecution of the offender. It may further be remarked that, pending the provision of safe means of irrigation, the river banks should be inspected just before the recurrence of the annual freshes, in order that it may be ascertained that all authorized cuts have been effectually closed. It is useless, I think, to hope that the Mirassidars will do this properly if left entirely to themselves, and many breaches, some of them occasioning heavy outlay, have occurred from cuts being loosely filled in at the last moment.

4. The circumstances attending the breach in the Senkalapuram surplus channel are under inquiry. In transmitting a further report, Captain Oakes should forward a longitudinal section of the bank which breached, and should show thereupon the positions of such of the breaches, besides that of this year, to which he alludes as having occurred in the last nine years (1867-68 excepted,) as can be identified; the level of the water on the 3rd and 26th July, and the level which would be reached during a maximum fresh, should likewise be noted. It will then be seen whether the circumstances were such as to preclude the probability of an accidental breach. I may add that definite information of this kind should always be forthcoming whenever it may be suspected that the Mirassidars have tampered with irrigation works, and then the Public Works Officers would be in a position to judge whether there was sufficiently good *prima facie* ground for instituting an inquiry, for the purpose of ascertaining whether a wilful injury had been done, and, if so, by whom.

5. With regard to crossings at river embankments, the Superintending Engineer has been informed what should be done. All crossings should have ramps on both sides of the banks, with proper gradients suited to the description of traffic to be accommodated. There will then be no occasion for lowering the banks either directly in order to get carts across, or indirectly by the wear and tear of the traffic across them, and this cause of danger will be at once removed. Certain precautions are necessary to ensure the traffic keeping to the regular crossings, and these have been pointed out. Arrangements should also be made for confining the traffic to regular roadways through the nanul plantations, on the preservation of which the regulation of the rivers, and the correction of sets against the banks, so much depend.

6. Captain Oakes's letter from paragraph 9 to the end refers to damage sustained this season by certain tanks in the Trichinopoly District, and by the road from Trichinopoly to Madura. The Appenanellore tank breached at a temporary sluice adjacent to the surplus calingulah. The

villagers appear to have made this temporary sluice because the permanent sluice had become choked. Probably this latter sluice might, at the proper season, have been rendered efficient at a small outlay of labour, but whether this be the case or not, the opening of the bund elsewhere without regular permission was, though a very common practice, very improper, and it should be put a stop to altogether. It will be noticed that the cost of closing the breach is estimated at Rupees 640, the assessment of the lands under the tank being Rupees 1,122. If, on due inquiry, it can be shown that any particular villagers are to blame, they should be so punished as to prevent a recurrence of the act which occasioned the damage, and doubtless the difficulty of ascertaining who were the offenders will be much lessened, if the alternative be the levy of the cost of the repairs from the landholders generally. A further result of the construction of the temporary sluice has been the breaching of the Kalacoody tank, and the damage done here will cost 910 rupees to repair.

7. The breaching of the Pilloor tank appears to have been caused by a pot sluice which the villagers had been directed to close. It should however be stated by whom, and when, this order was given, also the date of the construction of the pot sluice. It is not at all clear at present why, when an estimate, Rupees 720, which chiefly provided for the re-building and raising of the rough-stone revetment, was prepared, the construction of a proper sluice instead of the pot sluice, a work probably much more necessary to the safety of the tank, was not provided for. Captain Oakes in paragraph 12 shows the result of this breach, and it will be seen how many interests have suffered. Captain Oakes informs me that dry stone revetments or wings are common to many of the calingulahs of this part of the country, and that he is taking steps to replace them by masonry walls. At the Vadacherry tank, which failed under the stress thrown upon it by the breaching of the Pilloor tank, and elsewhere, these improvements should be carried out as rapidly as possible. The money saved by the diminution of breaches will probably more than pay for the alterations, and as there can be no doubt of the urgent necessity for making such surplus escapes efficient, and for removing the risk which they at present entail, this work should be taken up at once and be systematically proceeded with.

8. With regard to the difficulty in providing for the safety of the lower tanks of a series, when the upper tanks do not belong to Government, the following arrangement will often be found applicable, and will add considerably to the chances of averting damage. Such lower tanks should have permanent escapes, large enough to provide for the discharge of the whole drainage of the catchment basin of the valley. These will guard against ordinary contingencies. In addition the ground at one or both ends of the bund should be cut down to one or two feet above full tank level, over a length sufficient to discharge, with the aid of the permanent escape, the whole contents of the upper tanks, not belonging to Government, in a couple of hours. Where the ground is soft a pavement six or eight feet wide may be laid down to prevent rapid erosion, and at the end next the bund such paving should be laid on a flat slope, the top being at the bund end, on well rammed gravelly soil, so as to prevent any tendency to encroachment in this direction. This is the most economical arrangement I can suggest, and, where the lie of the ground is favourable, by its means the safety of the tanks may be secured at a moderate cost. These supplementary escapes would only occasionally pass water, and this for a very short period at a time; the ground would be more or less cut up, and perhaps some of the regular supply would be lost, but they would prevent the breaching of the tanks and the utter loss of the water on which the crop of the season depends.

Fort Saint George,
7th October 1869.

(Signed) J. MULLINS, Major, R.E.,
Acting Chief Engineer for Irrigation.

No. 480.

ORDER THEREON, 24th November 1869, No. 3,739.

IRRIGATION, No. 23.

THE Government are glad to find, from the papers above recorded, that the freshes of the south-west monsoon in the Cauvery have been very favourable, and that, in the absence of high-floods, the irrigation works of the Tanjore District have sustained but few injuries and those of small extent.

2. The Government consider it to be very advisable that sluices in the banks of the principal rivers should be designed and constructed in the Public Works Department, and the Superintending Engineer will, therefore, be instructed to attend to the recommendations made by the Acting Chief Engineer for Irrigation in paragraph 2 of his note; and, in communication with the Collector, he will take care that these orders are made known through the *District Gazette*.

3. Such sluices as may be necessary to allow of the permanent closing of all cuts for purposes of irrigation or drainage in the banks of rivers, should be provided as soon as possible, and thereafter any attempts to open, or interfere with embankments intended to control flood-waters should be promptly repressed.

4. The Government will await a further report on the circumstances attending the breaching of the bank of the Senkalapuram surplus channel; in the meantime Captain Oakes's attention will be called to the remarks of the Acting Chief Engineer with a view to the final report being made full and conclusive as to the probable cause of the damage.

5. The provision of suitable crossings, wherever necessary for the convenience of the traffic across the river embankments, should be made as early as possible. Until this can be done frequent inspections will be necessary, and the existing establishments should be fully utilized for the purpose of preventing accidents resulting from the wear and tear caused by traffic over banks unprovided with ramps. All necessary precautions should be taken to confine the traffic to the crossings provided.

6. The Government desire to be furnished at an early date with the result of the inquiries made by the Collector of Trichinopoly into the circumstances attending the breaching of certain tanks in that district. Very considerable loss of crops, and of revenue, in addition to the outlay for repairs, will apparently result from proceedings on the part of the villagers which are highly objectionable, and which must be entirely stopped for the future, even if, by so doing, some land should be left uncultivated until additional sluices can be provided.

7. The Superintending Engineer is requested to instruct the several Range officers to ascertain how far the lower tanks of a series, in the several parts of the district, can be rendered more secure by the adoption of the arrangement suggested by the Acting Chief Engineer, and to carry out this plan wherever it may be found that local circumstances will allow of the construction of efficient supplemental escapes of the kind indicated.

(True Extract.)

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

ORDER THEREON 7th December 1869, No. 14.

COMMUNICATED to the Board of Revenue.

(True Extract.)

(Signed) H. WELLESLEY,
Acting Under-Secretary to Government.

To the Board of Revenue.

COMMUNICATED to the Collector of Trichinopoly, who is requested to forward the information called for in paragraph 6 of the Government Order of 24th November, (Public Works Department,) No. 3,739.

2. The Collector will give his utmost assistance to the officers of the Public Works Department in carrying out the improvements and precautions suggested by Major Mullins; but is requested to be careful, in so doing, to avoid giving rise to Civil actions.

3. The Board consider several of the suggestions approved by Government well worthy of consideration in all districts, and a copy of these Proceedings will be communicated to all Collectors, whose attention is specially drawn to paragraph 5 of the Government Order of 24th November, wherein the necessity for providing for the passage of traffic across river embankments is pointed out.

4. The Board also call attention to the suggestions of Major Mullins (*vide* paragraph 8 of his letter) for constructing supplemental escapes for tanks.

(True Extracts.)

(Signed) A. MACGREGOR,
Acting Secretary.

(True Copy.)

(Signed) J. T. MAYNE,
First Assistant.

To all Collectors.

Ed. T. Cartledge.

77-893.

C^t to the P.W. & with
reference to the order
in that Dept under

Order 24th November 1890 & 3/29
Barab.

[Signature]

17th June 1901.

[Signature]

21 Feb 1901 P.W. Dept 3/20
14 — 687 P.W.

5/11

Received Dec 11 1898

1870.

Board of Revenue,

MADRAS.

PROCEEDINGS, 25TH JANUARY 1870, No. 520.

Encl.

Received

JANUARY.
No. 520.

Floods in the Cauvery river.—Orders of Government on report of Superintending Engineer, 6th Division, on—, and on effects of rain-fall in Trichinopoly, communicated to Collector, with request to forward result of enquiries made by him into circumstances attending breaching of certain tanks in district. Government Proceedings, circulated to all Collectors, and their attention called to suggestions of Acting Chief Engineer for Irrigation for constructing supplemental escapes for tanks and to necessity for provision of suitable crossings for passage of traffic across river embankments.