

(1) Number of Pages..... 6 .
(2) Date of repair..... 1 - 6 - 68 .
(3) Initials of the Referencer..... *[Signature]*

MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

Revenue DEPARTMENT

G.O. No.	572.	Press
B.P. No.		Mis.
Dated	23 - 3 - 1875 . 196-..	

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*Proceedings of the Madras Government, Public Works Department,
19th March 1875.*

Read the following papers:—

No. 500. From Captain J. PENNYCUICK, R.E., District Engineer, North Arcot, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Vellore, 20th November 1874, No. 2,366.

With reference to G. O., No. 3,210, of 13th instant, I have the honor to state that, so far as this district is concerned, little or nothing remains to be done for the protection of the railway from injury owing to the breaching of tanks.

2. The subject has received careful consideration during the time that I have held charge of the district, and the best proof of the attention that has been given to it lies in the fact that, as far as I am aware, notwithstanding the almost unprecedented floods that have occurred during this year, there has not been a single instance of direct injury to the railway owing to the action of any work belonging to Government.

3. The flood in the Cortilliar was doubtless increased by the enormous discharge of the Caveripauk tank calingulah, caused by the bursting of the Poondy tank; but with regard to this it may be observed, first, that the flood did no damage; second, that the bursting of the tank was not due to any defect in the tank itself, but to an entirely abnormal overflow of the Palar; and, third, that measures have already been taken for preventing a recurrence of such a disaster, and that estimates for the necessary embankment, which will form the subject of a separate report, are now on my table.

4. The flood in the Poiney may also have been to some slight extent affected by the bursting of the Poiney tank, but in this case the quantity of water let loose was not sufficient to produce any serious increase to the natural flood, and this breach also was caused by the overflow of the river, and not by any defect in the tank itself.

5. The embankment between Arcorum and Sholinghur was, I believe, injured by the flood in the branch of the Cortilliar which is crossed by the railway about the 46th mile, but this flood was caused by local rain and consequent tank surplus, and not by breaching of tanks.

6. The Attoopaukum tank, referred to in paragraph 4 of Lieutenant Coaker's letter as affecting the seventh mile of the Carnatic line, is more properly known as the Pinnevaram tank, and is one of those for which estimates were sanctioned by G. O., No. 2,214, of 14th August 1874; the estimate for this work includes the construction of a calingulah, the proper position for which is correctly indicated by Lieutenant Coaker.

7. It must, however, be borne in mind that the Carnatic line crosses a large amount of tank surplus drainage, and will always be liable to damage, however good the condition of the tanks themselves may be, unless ample waterway is provided for this drainage.

8. I have within the last few days been over the Carnatic line (as far as Pulloor) with Lieutenant Coaker and Mr. Fox, and believe that the necessity for additional waterway is sufficiently recognized.

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9. I hope I have made it clear that the protection of the Railway from danger through irrigation works has not been neglected in the manner apparently supposed by Government. A few open river channels still require to be covered by

* It must, however, be remembered that our funds for minor new works are limited; the estimates sanctioned for such works in this district at present amount to Rupees 18,426 against a budget grant for the year of Rupees 6,000.

head sluices, and these will receive attention; * doubtless, from time to time, works will fall into disrepair and require repair, and one work (the Menil tank) which had been overlooked has recently been brought to notice and will be

attended to; but these isolated cases are no more than can be easily managed, and will be managed by the ordinary staff of the district.

10. If one of the shortly expected Assistant Engineers can be spared for duty in this district I shall be very glad, for there is plenty of work to be done; but there are other matters far more pressing than the protection of the Railway I may mention, as the most urgent, the proper regulation of the Palar and Cheyaur by means of embankments; this, however, will form the subject of a separate report.

No. 1,045-A.

No. 501.

Note by the Chief Engineer for Irrigation.

THE letter, No. 2,366, of the 20th ultimo, from the District Engineer, North Arcot, contains information of interest in connection with G. O., No. 3,210, of the 13th idem, and it is satisfactory to find that already nearly all that is practicable in that district has been done to prevent tanks continuing to be a source of danger to the railway.

2. In the Salem District, between a few miles south-west of Salem and the Cauvery, there are only a very few tanks, and these of small size, commanding the Railway; these can and should all be made safe and efficient during the first-half of 1875-76 if funds be available. Government have already been informed that

No. 984-A, dated 1st December 1874.

the District Engineer has been provided with much more money under Minor

New Works than the amount of the budget grant for the district. Near Salem there is a small catchment basin to the west of the railway with about a dozen small tanks in it. Several of these have been recently inspected, and the way in which they should be treated pointed out. To the eastward also there are a few tanks on affluents of the Salem river, but none of them are large. They should be taken up successively as soon as may be practicable. The line of railway in this neighbourhood does not appear to have sustained any damage. Between Mullapuram and the Pooniar there are but three or four tanks, and no chains of tanks above the railway; there are many tanks in the basin of the Pooniar which surplus into that river, and in the interests of South Arcot as well as of the railway they should be rendered perfectly safe. The north-east corner of the Salem District, from Tripatore to Vaniembady, is the locality in which so many tanks gave way this year; a majority of these appear to be tanks not belonging to Government. Their requirements have been ascertained, and for two of the

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groups the measures taken with regard to them have already been reported.*

* No. 984-A, dated 1st December 1874.

The Tripatore and other tanks in the neighbourhood will be inspected by me in January.

3. As regards Chingleput, at any rate in this year, very little has been done, for as already noticed in submitting the monthly statements of outlay on Repairs and Minor New Works, this district has been greatly behindhand. Those tanks or chains of tanks which surplus directly across the railway, i.e., not first into some considerable river, should be first attended to, for they are more apt to occasion damage. It will certainly take a good deal of time and study to deal effectively with the drainage of the Chingleput District, because many of the minor water sheds and even some of the larger ones are liable to overflow by the smaller rivers, and again several of them are intersected by artificial channels which divert outfall from its natural course. The proposed operations in North Arcot, for the effective embanking of the Palar and the regulation of the channels taking off from that river, will have a very beneficial effect upon Chingleput, and especially upon the drainage which crosses the Conjeeveram line of railway.

* About 110 square miles.

The Chembrambakum drainage basin* is one of the first that must be attended

to, as it is of very great importance that every tank above that great reservoir should be in perfect order. The next in importance is the Madranticum basin:†

† About 330 square miles.

the Madranticum tank has been in

danger three or four times in the last three years from the breaching of tanks above it, and the safety of the South Indian Railway is intimately connected with the security of this series. A good many of the tanks in the part of the basin situated in the North Arcot District have been attended to, or at least have had their requirements ascertained and estimates sanctioned, but more money is required for Minor New Works. Recently a survey establishment has been sanctioned to admit of this tract being more comprehensively dealt with. In Chingleput, as much progress has not been made, but the part of this basin in that district is comparatively small. The subject has been repeatedly under the notice of the Superintending Engineer, and it is hoped that a fair start will soon be made. Another very important group is that of which the Tennary is the terminal tank, and many of the upper tanks of this series affect the Conjeeveram line of railway.

4. All District Engineers have been informed that assistance in the way of temporary establishments will be given

Circular No. 62.

them on their submitting estimates, sup-

ported by such information as will show that they themselves know what the Surveyors are to do.

With regard also to the way of dealing with tanks, so as to render them safe and efficient, very full instructions have been given in the Circulars issued from this office. Nothing more can, it is thought, be done in this direction generally; whenever also estimates have been sent up for sanction they have been reviewed in detail, and such subsidiary instructions as were necessary given. The importance of the subject, and the need of a radical change in the old system of

patching up tanks without ascertaining or providing for their real requirements, has been fully understood by this office, and what little improvement in this respect has as yet been effected is due to the instructions given, and to the pressure which has been applied by insisting in the case of all estimates submitted for the sanction of Government that the essential conditions of safety should be attended to. When the Public Works Commission was sitting, some five years ago, several Revenue Officers considered that the Chief Engineer for Irrigation should not concern himself with the tanks of the country, and should not interfere with the proceedings of the local officers of the Revenue and Public Works Department in regard to them, but this very erroneous view of what was necessary was not acquiesced in, and a very considerable share of the time and attention of this office has been devoted to an endeavour to introduce system and order, and to secure a due return for expenditure. That more success has not attended these efforts is due to several causes, among which the principal are—

1st.—The large amount of work to be done, and the incapacity of many Range Officers to deal with it effectively without much more instruction than officers in such a position should require.

2ndly.—To the absence of the preliminary information on which alone action could properly be taken.

3rdly.—The absence in some cases of that zeal and energy which are essential to the effective treatment of work requiring painstaking investigation, much thought, and a very large amount of trouble. As a rule, I do not think that the Government are likely to obtain unlimited devotion to work without a material modification of the details of the present organization of the Department. The system would be good enough were District Engineers' valuable appointments as they were in 1857—1863, and were proper qualifications required of, and corresponding pay allowed to, all members of the Department holding Ranges. Government do get most excellent and unstinted service from some District Engineers and Range Officers, but it is my impression, and I see a good deal of what is going on, that with many there is great room for improvement, and that, so long as many members of the Department are contented neither with their present position nor with their prospects, and would gladly get out of the Department if they could, this improvement is not likely to be secured very rapidly.

5. A copy of the instructions issued in connection with the preparation of the return required by Government is submitted.

CAMP AT AUTHUR,
14th December 1874. (Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 502. ORDER THEREON, 19th March 1875, No. 781.

IRRIGATION, No. 34.

HIS EXCELLENCY the Governor in Council is glad to receive these assurances of concerted action having been taken between the Chief Engineer for Irrigation and the Officers in charge of

Districts for securing the railways from damage by the Irrigation Works by which they are commanded. It is most satisfactory to find that the effects of such action have already told in the District of North Arcot; to the energetic officer in charge of which, Captain Pennycuik, R.E., great credit is due. Lieutenant-Colonel Mullins may rely on the thorough appreciation by His Excellency the Governor in Council of his untiring efforts to place the treatment of Irrigation Works upon a proper footing; and on his full support of every practical recommendation that may be made for carrying out the orders of Government on this important subject.

2. His Excellency in Council will only observe, with reference to the matters discussed in paragraph 4 of Colonel Mullins' letter, to which the attention of District Officers will be directed, that he expects that in the reports due after June next it will be plainly stated who have failed to carry out the orders of Government and the subsidiary instructions of the Chief Engineer for Irrigation; and to what extent such failure may be attributed to incompetence or to apathy.

3. The damages caused to the North West Line by Irrigation Works of Cuddapah and Bellary require the extension to those districts of the Order of the 13th November, No. 3,210. But it is applicable in spirit not only to them, and to the districts of Coimbatore, Trichinopoly and Tanjore, through which the railways already run, but also to South Arcot, Madura, and Tinnevely, through which they are in progress. And this, His Excellency in Council observes, has already very properly been understood and acted on by the Chief Engineer for Irrigation in his Circular No. 1,010, of 14th December 1874.

(True Extract.)

John Mullins Colonel, R.E.,
Secretary to Government.

To the District Engineer, Salem.

"	"	North Arcot.
"	"	Bangalore
"	"	Chingleput.
"	"	Malabar.
"	"	Bellary,
"	"	Cuddapah,
"	"	South Arcot,
"	"	Tanjore,
"	"	Coimbatore.
"	"	Trichinopoly,
"	"	Madura,
"	"	Tinnevely,
"	"	Chief Engineer for Irrigation.
"	"	Consulting Engineer for Railways.
"	"	Revenue Department.

with G. O. No. 3,210 of 1874.

Exd. S. T. Austin.

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THE DEPARTMENT OF REVENUE, SALEM.

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Comin^g to the
Board of Revenue
23rd March 11.