

- (1) பக்கங்களின் எண்ணிக்கை 4
 (2) புதுக்கித் திருப்பிய நாள் 8/92
 (3) ஆதாரக் குறிப்பவர் சுருக்கொப்பம் 2

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

rw. p
 துறை

அரசாணை எண்.	572	அச்சகம்
மு. கோப்புத் தாள் எண்.		பலவகை
நாள் :	2. 3. 1894	199

மடிக்கவோ துண்டியடி கையாளவோ கூடாது.

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ஆவண. கா. 2-18,006-6-9-90.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—the following papers :—

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 23rd December 1893, No. 2813.

With reference to my No. T-124, dated 1st December 1893, and to the Chief Engineer's inspection, I have the honour to forward a report, plans and estimates (copies) from the Assistant Sanitary Engineer, Tanjore, which embodies the proposals approved of by the Chief Engineer.

2. I think that Mr. Lockyer's proposal to raise the west road is not necessary, and that it would be better if it were left at the same level as at present, but otherwise I have nothing to remark as I concur in his other proposals and as the information given in the report is full and complete.

ENCLOSURE.

From J. E. LOCKYER, Esq., A.M.I.C.E., F.I.N.I.T., Assistant Sanitary Engineer, to the Sanitary Engineer to Government, Madras, dated Tanjore, 20th December 1893, No. 1589.

My No. 1501, dated 24th November 1893.

In continuation of my above and in accordance with the verbal instructions given on your inspection in company with the Chief Engineer to Government, I have the honour to submit the following report with necessary plans and estimates for repairing the damage done to the Padukolam road and for providing such additional waterway on it as is considered necessary to ensure its future safety under like conditions of excessive flood and so prevent the possibility of future damages to the 18" main.

Report.

1. In the 24 hours between 8 A.M. on the 22nd and 8 A.M. on the 23rd ultimo, an abnormal quantity of rain fell in the district of Tanjore, and for a long distance round, —the fall at Vallam (about 7 miles from here) being 10 inches, at Tanjore 9.73 inches, at Trichy 6.61 inches, and Negapatam 6.17 inches; hence Vallam and Tanjore, from these rainfall reports, were about the centre of the rain burst.

2. There was continuous rain for the preceding three weeks; hence the ground was fully saturated, tanks were partly filled and the rivers of the delta running high, so that when the excessive rainfall of the 22nd—23rd occurred, it was only natural that breaches in the banks of the rivers would be likely.

3. The Vadavár receives the drainage of Vallam, and provision is made for excessive rainfall from this direction by allowing it to surplus into the Vennár, about a mile west of the Padukolam road. This, however, proved insufficient, and the water in the Vadavár topped its banks

breaching the same and flooding the delta between the two rivers till they became practically level. It is doubtful whether the breaches were entirely due to flood, as I have not heard of any occurring on the left bank, and it is supposed that the residents or owners of the houses coloured sepia, when they found the banks were being overtopped, cut the banks to the east and west of the block to prevent the banks being burst opposite their houses, and this would certainly have occurred had they not done so, the principal cause of the breaching being the insufficient waterway provided for the Vadavár on the Pudukolam and Eastern roads. The deepening of the southern flood-channel of this river would greatly assist in preventing future breaches, but this is a matter for the consideration of the Public Works Department.

4. It will be seen from the diagram of waterway accompanying (sheet No. 2) that the flood provision for the Pudukolam road is much less than for the Eastern road and utterly inadequate to carry off any large quantity of water. The consequence was that when the Vadavár left bank was breached up-stream of the town, the flood water was unable to pass the Pudukolam road, and rising rapidly it overtopped and breached the road, being assisted by the villagers of the hamlets to the west of the road cutting it to carry off the water from their houses.

5. The enormous quantity of water accumulated to the west of the road was thus thrown suddenly on to the Eastern road, breaching that also; but I do not think this would have been breached had the Pudukolam road been bridged to the same extent as the Eastern road, as the water could not then have accumulated behind the Pudukolam road in the way it did.

6. Another reason for the breaching of the Eastern road is that the openings of bridge on it marked No. 1 in the plan have been within the past few years blocked up with masonry to prevent backwater from the Vennár running back through it on to the land to the west of the bridge.

7. If the Vadavár had not breached, then the Vennár would have certainly done so, because it topped its banks and flowed over in several places, but the rice land between it and the Vadavár being already covered with water to nearly the level of the top of the flood bank of the Vennár no rush occurred, hence no breaching. If there had been no flood-water on the rice land, or if it had not been so high, then as soon as the Vennár commenced to overflow its banks, breaches would naturally have formed, and such may be the case in future.

8. To make the pipe-line safe, therefore, the following is necessary:—

(A) The right bank of the Vennár, from the pumping station to the Vennár bridge, should be raised to the same level as the land at the pumping station, viz., 131.00. This is the minimum height admissible as the flood line at the pumping station was R.L. 131.74, and at the bridge 130.46. There is no reason why this length should be higher than 131.00, because the flood could not rise to 131.74 if the rice lands between the two rivers were not flooded to nearly that depth. If the rice lands were flooded to that depth, then no breach of the road could occur with its level at 131.00, because there would be no flow over it, although it might be submerged a few inches if a higher flood than the late one occurred, which is scarcely probable as it is the highest ever known, and the flood area above this level would be so immensely increased by a rise of even two or three inches (in consequence of the flatness of the ground) that it could receive a very large rainfall without appreciably increasing the height when the flood had reached its late height. To further ensure the safety of the road, a dry laterite curbing is proposed for the southern edge of the road, and the levels of the tops of these curb stones should be tested annually with a spirit-level, and raised to proper level if found at all sunk, the road being raised proportionately at the same time.

(B) (1) The breaches in the Pudukolam road to be repaired; (2) the road levelled to R.L. 130.00 as shown on the section (sheet No. 1); (3) the waterway of the road to be increased so as to be equal in discharging capacity to the waterway on the Eastern road.

(C) As an additional precaution a paved causeway to be provided at the site of the breach shown at chain 4,900 on the longitudinal section of the Pudukolam road.

9. If preliminary sanction to the scheme be given early, contracts for brick-making and the collection of lime and broken stone can be given out, pending the preparation and submission of detail plans and estimates, thus allowing the foundations to be got in at the most favorable time of the year.

10. The following are the plans and estimates accompanying this report. The estimates are closely approximate, but not likely to be exceeded; if the general scheme be approved, detail drawings and estimates will be prepared:—

Appendix I.—Drawing No. 46 (sheet No. 1). Plan and sections on the Eastern and Pudukolam roads.

Appendix II.—Drawing No. 46 (sheet No. II). Diagram of (a) waterway on the Eastern road, (b) waterway on the Pudukolam road, (c) proposed additions to the latter.

Appendix III.—Calculations for theoretical discharging capacity of waterways for above.

Appendix IV.—Abstract of detailed estimate.

No. 20.

Referred to the Public Works Department for remarks.

FORT ST. GEORGE,
18th January 1894.

(Signed) A. T. PRINGLE,
Assistant Secretary.

Note by the Chief Engineer, Public Works Department, dated 24th January 1894.

Mr. Lockyer's proposals, which are in accordance with the views expressed in my note, dated 12th December 1893, are approved, but, as remarked by Mr. Jones, there is no necessity to raise the level of the roadway above what it is at present.

Deepening the south flood-channel is unnecessary and will be of very little use as it will silt up again before another extraordinary flood occurs.

The openings to Bridge No. 1 should not have been built up in masonry.

If it is necessary to exclude Vennár water from backing through this bridge—which seems doubtful—the required result can be obtained by the use of swinging shutters.

(Signed) J. PENNYCUICK, Col., R.E.,
Chief Engineer, P.W.D.

No. 378-C.

Transferred to the Local and Municipal Department with reference to endorsement in that department, No. 20, dated 18th January 1894.

(Signed) J. PENNYCUICK, Col., R.E.,
Secretary to Government, P.W.D.

ORDER—dated 9th February 1894, No. 141 M., Local and Municipal.

The proposals of the Assistant Sanitary Engineer, as modified by Mr. Jones, are approved, and should be given effect to as soon as possible.

2. Detailed plans and estimates should be submitted for the sanction of Government at an early date.

3. A report should be called for in the Public Works Department as to clearing Bridge No. 1 on the Eastern road.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Sanitary Engineer.
" Chairman, Municipal Council, Tanjore.
" Collector of Tanjore.
" Public Works Department.

Encl. A. Raitt.

Gobt. of {1894} Madras.
LOCAL AND MUNICIPAL.

Issued

Recd.

Encl.

G.O., 9th Feb. 1894, No. 141 M.

FEBRUARY.

Works.

Approving, with remarks, the proposals of the Assistant Sanitary Engineer, as modified by Mr. Jones, for repairing the breaches in Pudukolam road, in the Tanjore district, and ordering that these proposals should be given effect to as soon as possible.

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W

Order thereon

N^o 572 W. dt 2nd March 1894

Communicated to the
Superintending Engineer
T. Circle who will report
on the subject of para 3 of
the order

(Sd) O. V. B.

To

The S. & T. Circle