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# TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

*Revenue* DEPARTMENT

|          |                  |        |
|----------|------------------|--------|
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GOVERNMENT OF MADRAS.  
PUBLIC WORKS DEPARTMENT.

3rd August 1877, No. 214 I.

Irrigation.  
Account.

Read the following paper :—

No. 175 I.

No. 8.

*Note by the Chief Engineer for Irrigation.*

THE following estimates from the No. 2 or Mount Range are forwarded by the  
Superintending Engineer, Chingleput, with  
No. 754, dated 5th June 1877. his letter marginally noted :—

| Taluq.      | Village.           | Work.                         | Amount. |
|-------------|--------------------|-------------------------------|---------|
| Sydapet ... | Tirunirmalai ...   | S. No. 245, Veeran-<br>yeri.  | Rs. 280 |
| Do. ...     | Do. ...            | S. No. 245, V. large tank.    | 1,377   |
| Do. ...     | Sittalapakkam ...  | S. No. 244, do. ...           | 860     |
| Do. ...     | Tolaikananjeri ... | S. No. 216, V. upper<br>tank. | 457     |
| Do. ...     | Melpakkam ...      | S. No. 101, V. tank ...       | 588     |
| Total ...   |                    |                               | 3,562   |

2. The financial and hydraulic details of the irrigation works concerned are  
exhibited in the following statement :—

*I.—Financial Details.*

| Name of Work.             | Aysat Area. | Assessment. | Average Revenue for five years. | Highest Revenue for five years. | During the previous four years. | OUTLAY.                                          |          |                                                  |
|---------------------------|-------------|-------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------------------------|----------|--------------------------------------------------|
|                           |             |             |                                 |                                 |                                 | PROPOSED<br>ORDINARY—AGRICULTURAL<br>IRRIGATION. |          |                                                  |
|                           |             |             |                                 |                                 |                                 | Original Works.                                  | Repairs. | Average Annual Proportion of Charges to Revenue. |
|                           | ACRES.      | RS.         | RS.                             | RS.                             | RS.                             | RS.                                              | RS.      | PER CENT.                                        |
| Tirunirmalai Veeranyeri   | 30          | 84          | 100                             | 104                             | NIL.                            | 80                                               | 200      | 56.0                                             |
| Do. large tank            | 288         | 1,055       | 559                             | 983                             | 274                             | ..                                               | 1,377    | 50.1                                             |
| Sittalapakkam large tank  | 142         | 530         | 461                             | 471                             | NIL.                            | ..                                               | 860      | 37.2                                             |
| Tolaikananjeri upper tank | 84          | 248         | 277                             | 455                             | 6                               | 92                                               | 365      | 33.4                                             |
| Melpakkam tank            | *78         | 281         | 294                             | 373                             | NIL.                            | 180                                              | 408      | 40.0                                             |
| Total ..                  | 622         | 2,201       | 1,791                           | 2,256                           | 280                             | 352                                              | 3,210    | 42.9                                             |

\* Partly supplied from Thoomalair tank.

## II.—Hydraulic Details.

| Name of Work.             | Catchment Basin, Area. | MAXIMUM SUPPLY        |                      | LENGTH OF ESCAPE. |            | AVERAGE HEIGHT OF BUND. |              | Surplus discharged at M.T.L. per Second. | Tanks above. |
|---------------------------|------------------------|-----------------------|----------------------|-------------------|------------|-------------------------|--------------|------------------------------------------|--------------|
|                           |                        | Catchment per Second. | Channels per Second. | Total.            | Effective. | Above F.T.L.            | Above M.T.L. |                                          |              |
|                           | SQ. M.                 | C. FT.                | C. FT.               | FT.               | FT.        | FT.                     | FT.          | C. FT.                                   | NO.          |
| Tirunirmalai Veeranyeri.  | 0.5                    | 425                   | ..                   | Cuts in bund.     |            | 2.75                    | 1.25         | 0.0                                      | Not stat.    |
| Do. large tank ..         | 2.0                    | 1,066                 | ..                   | E 83              | 83         | 3.75                    | 2.25         | 422.5                                    | ed.          |
| Sittalapakkam large tank. | 1.0                    | 562                   | ..                   | E 348             | 348        | 3.75                    | 2.25         | 1073.9                                   | 3            |
| Talaikananjeri upper tank | 0.75                   | 553                   | ..                   | E 182             | 182        | 4.25                    | 2.75         | 561.6                                    | 1            |
| Melpakkam tank ..         | 0.5                    | 351                   | ..                   | E Not stated.     |            | 3.5                     | 1.5          | 0.0                                      | NH.          |
|                           |                        |                       |                      | E 41              | 41         | 3.75                    | 2.25         | 203.7                                    |              |
|                           |                        |                       |                      | E Cuts in bund.   |            | 3.0                     | 1.5          | 0.0                                      | NH.          |
|                           |                        |                       |                      | E 85              | 85         | 3.75                    | 2.25         | 432.7                                    |              |

NOTE.—The proposed dimensions of escapes and heights of bund are printed in large type; the existing dimensions in small type. The following abbreviations are used: U.—Calingulah with dam stones; W.—Weir with overfall; E.—Escape at ground level; B.—Bund of tank; V.—Village; F.—Push escape; and S.—Revenue Survey.

3. The following is a summary of the work proposed to be carried out in each case:—

*Tirunirmalai Veeranyeri Tank.*—This tank belongs to the Tirunirmalai group and receives the drainage of the adjacent hills. The bund is low and weak and the revetment needs to be repacked; the sluice is in need of repairs and the tank is without a proper surplus work, the surplus at present being discharged by means of cuts made in the bund.

The estimate provides for—

1st.—Raising and repairing the bund, repacking the revetment and for turfing the unrevetted portions, also for repairing the irrigation sluice.

2nd.—Constructing a rough stone escape.

The position of this tank in the group to which it belongs has not been distinctly stated; it seems probable however that it is the highest of the group, and on this assumption the estimate is recommended for sanction.

*Tirunirmalai Large Tank.*—This tank also belongs to the Tirunirmalai group, and receives the surplus of the Kadapperi, Alari, and Tirunirmalai Veeranyeri tanks in addition to the drainage it receives from the hills above it.

The bund is much cut up in places and requires to be widened and levelled. The two irrigation sluices require repair, and the plug-hole of No. 1 sluice needs to be enlarged.

The surplus of this tank escapes through cuts in the bund.

The estimate provides for repairing bund, repacking revetment, and turfing where necessary, forming an escape planted with grass 348 feet long, and repairing two irrigation sluices.

Judging from the irrigated area under this tank, the area of its catchment basin appears to have been under estimated, but the co-efficient adopted for the calculation of the discharge from it is high. It is not desirable to form grass planted escapes where the tanks are of considerable size and are situated in the vicinity of rocky hills. A rough stone escape will cost about Rupees 200, and will supersede the grass planting Rupees 36-4-0 and earthwork amounting probably to Rupees 40-12-0. Nothing is said as to the condition of the two tanks next above this one; it is supposed that they are safe, or are being made so on the sanction of the Superintending Engineer; a sketch of the group ought to have been sent. There are Revenue Survey maps, of which far too little use appears to be made.

The estimate as revised is recommended for sanction.

*Sittalapakkam Large Tank.*—This tank belongs to the Naumangalam group, and receives the surplus of a small tank known as the Nochi tangal in addition to its local drainage.

The bund is low, and its front slope is much eroded. The two irrigation sluices are in need of repairs. The tank has no proper surplus work, the surplus escapes through cuts in the bund.

The estimate provides for raising and repairing the bund, repacking the revetment, and for turfing where necessary, forming an escape 182 feet long planted with grass, repairing the two irrigation sluices, and enlarging the plug-holes.

The area of the catchment basin of this tank also appears to have been somewhat underestimated, but the length of escape provided is probably sufficient.

A sketch of the group should have been sent or a Revenue Survey map in illustration. Rupees 50 are probably as much as it is advisable to spend on "turfing," and the amount of estimate recommended for sanction is Rupees 770.

*Talaikananjeri Upper Tank.*—This tank is the fourth of the Ullagaram group. It receives its supply from the adjacent hills and surpluses into the lower tank, which latter was repaired in 1875-76, and is in good order.

The bund is low and the sluice is in need of repairs and its plug-hole requires to be enlarged.

The tank is in need of a surplus work.

The estimate provides for—

1st.—Raising, repairing and turfing the bund, and repairing the irrigation sluice.

2nd.—Constructing a flush escape at the north end.

The estimate also provides for repairing the sluice and enlarging the plug-hole and improving the calingulah of the Talaikananjeri lower tank.

The estimates are not recommended for sanction, as it is not at all clear that it is advisable to raise the bund and provide a special restricted opening for communication between the upper and lower tanks as appears to be proposed. It would seem better to treat the two tanks as one, leaving free communication between their waters over natural ground passing the whole surplus of both over an escape near the north end of the lower tank. There may be objections to the course proposed, but they are not discoverable from the information supplied.

*Melpakkam Tank.*—This is an isolated tank, and the cultivation under it is partly supplied from the Thoomalair tank.

The bund is considerably damaged and the sluice is in need of repairs.

The tank has no proper means of disposing of surplus, cuts in the bund being used for this purpose.

The estimate provides for—

1st.—Raising and repairing the bund, repacking the revetment, and turfing where required, also for repairing the irrigation sluice.

2nd.—Constructing a flush escape.

The provision of Rupees 110-7-3 for turfing seems unnecessary, especially as it appears that there is a stone revetment to 2 feet 6 inches above proposed F.T.L.

From the cross section at the site for the proposed escape it would appear that F.T.L. had better, if there are no objections to this augmentation, be 6 inches higher than shown, and that the level of the pavement should be + 91. Rupees 15 would then cover the cost of the earthwork in connection with the escape, and Rupees 60 of the amount provided in the estimate, for, it is supposed, excavation of a channel to

and from the escape can be devoted to raising the bund of the tank to + 94.75. The estimate reduced for turfing is recommended for sanction.

FORT ST. GEORGE,  
27th July 1877.

(Signed) G. T. WALCH,  
Ag. Dy. Chief Engr. for Irrigation,  
for Chief Engineer for Irrigation.

To the Joint Secretary to Government, Public Works Department, Irrigation Branch.

No. 9. ORDER THEREON, 3rd August 1877, No. 214 I.

The following estimates for Irrigation Works in the No. 2 or Mount Range, Chingleput District, forwarded by the No. 115 I, dated 30th July 1877. Chief Engineer for Irrigation with his memorandum marginally noted are sanctioned:—

*Irrigation.*

| Group.          | Name of Tank.              | Provision of Estimate.              | Fund and Main Head. Ordinary Agricultural Irrigation. | Amount. | Irrigation Register No. |
|-----------------|----------------------------|-------------------------------------|-------------------------------------------------------|---------|-------------------------|
|                 |                            |                                     | CLASS.                                                | RS.     |                         |
| Tirunirmalai .. | Tirunirmalai Veeranyeri..  | { Repairing bund and sluice ..      | Repairs ..                                            | 200     | 1 } 113 I.              |
|                 |                            | { Rough stone escape ..             | Original Works ..                                     | 80      | 2 } 113 I.              |
| Do. ..          | Tirunirmalai large tank .. | { Repairing bund and two sluices .. | Repairs ..                                            | 1,300   | 1 } 114 I.              |
|                 |                            | { Rough stone escape ..             | Original Works ..                                     | 200     | 2 } 114 I.              |
| Naumangalam ..  | Sittalapakkam do. ..       | { Repairing bund and two sluices .. | Repairs ..                                            | 770     | 1 } 115 I.              |
|                 |                            | { and forming a planted escape ..   |                                                       |         |                         |
| None ..         | Melpakkam tank ..          | { Repairing bund and sluice ..      | Repairs ..                                            | 300     | 1 } 115 I.              |
|                 |                            | { Flush escape ..                   | Original Works ..                                     | 180     | 2 } 115 I.              |

2. These sanctions are registered as shown above.

3. The estimate for the Tolaikananjeri tank should be reconsidered.

(True Extract.)

*G. T. Walch*

Colonel, R.E.,

*W. L. S.*

Joint Secy. to Govt., P.W.D.,

Irrigation Branch.

To the Superintending Engineer, Chingleput.  
" Collector of Chingleput.  
" Chief Engineer for Irrigation.  
" Examiner of Public Works Accounts.  
" Revenue Department.

Exd. A. Grubert.

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