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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

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1881
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GOVERNMENT OF MADRAS.
PUBLIC WORKS DEPARTMENT.

8th April 1878, No. 308 I.

Irrigation.
Account.

Read the following papers :—

No. 37. From Lieutenant-Colonel H. L. PRENDERGAST, R.E., District Engineer, North Arcot, to the Chief Engineer for Irrigation, dated Vellore, 10th November 1877, No. 2,806.

I HAVE the honor to submit for sanction plans and estimates of Rupees 880 and Rupees 930 for repairing and improving the Tenabanda Covil and Elaya Nellore Tanks in the Chittoor Taluq.

Two plans.
" sections.
Four detailed estimates.
" abstract do.
One statement.

2. *Tenabanda Covil Tank*.—The bund of the tank is low throughout and requires raising; the old stone revetment is much out of order and needs replacing.

The tank receives no surplus from tanks above; it has a drainage supply of 884 cubic feet per second, but it has no escape; it is therefore proposed to construct an escape, 94 feet in length, of rough stone in chunam at the north end of the bund.

Elaya Nellore Fakeer Thangal Tank.—The bund is very low for the greater part of its length and it is much overgrown by pricklypear. The tank has no surplus weir, but at present the surplus is let out by a cut at the end of the bund. There are no tanks above, and it is proposed to build an escape of rough stone in chunam 36 feet in length to discharge a maximum drainage supply of 212 cubic feet per second.

3. The necessary hydraulic and financial details are given in the enclosed statement.

4. I request that the enclosures may be returned when no longer required.

No. 37-A.

No. 93 I.

Note by the Chief Engineer for Irrigation.

THE following estimates from the Chittoor Range are forwarded by the District Engineer, North Arcot, with his letter Dated 10th November 1877, No. 2,806. marginally noted for two isolated tanks :—

Taluq.	Village.	Work.	Amount.
			rs.
Chittoor	Tenabanda	V. Covil Tank	880
Do.	Elaya Nellore Fakeer Thangal	V. Tank	730
		Total	1,610

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

I.—Financial Details.

Name of Work.	Adjacent Area.	ACRES.	RS.	RS.	RS.	RS.	RS.	RS.	Per cents.
Tenabanda Covil Tank	..	82	613	600	Not stated.	None.	720	560	29.3
Elaya Nellore Fakcer Thangal Tank	..	34	219	206	Do.	Do.	190	545	70.8
Total ..		116	832	806	..	..	910	1,105	39.9

II.—Hydraulic Details.

Name of Work.	Catchment Basin Area.	MAXIMUM SUPPLY.	LENGTH OF ESCAPE.	AVERAGE HEIGHT OF BUND.	SURPLUS DISCHARGED AT M.T.L.	Tanks above.	Area irrigated per Square Mile of Drainage.
Tenabanda Covil Tank	sq. M.	C. FT.	C. FT.	FEET.	FEET.	FEET.	FEET.
..	1.5	584	..	92	92	2.96	0.66
Elaya Nellore Fakcer Thangal Tank	0.375	212	..	94	94	4.50	2.50
..	..	..	..	20	20	1.75	0.25
Total	..	..	..	36	36	3.00	1.50
..	..	..	..	..	..	..	..

Note.—The proposed dimensions of escapes and heights of bund are printed in Antiqua; the existing dimensions in plain type. The following abbreviations are used:—C, catchment with dam stones; W, weir with overfall; E, escape at ground level; B, bund of tank; V, village.

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

Tenabanda Covil Tank.—This tank is situated in latitude 13° 14' 25", longitude 79° 8' 30". The bund is low throughout and the stone revetment is much out of order. The surplus is discharged by means of a rough stone escape. The tank has an irrigation sluice which is stated to be in good order.

The estimate provides for—

1st.—Raising and repairing the bund, repacking the revetment, and turfing the unrevetted slopes of the bund.

2nd.—Constructing a masonry weir in lieu of the rough stone escape.

It is presumed that the lower retaining wall of this weir is to be built on rock, otherwise the proposed work will probably not be more stable than the original dry stone escape. If the formation of the bed of the surplus nullah is not sufficiently compact to withstand the direct overfall of 8 feet, it will be advisable to relay the dry stone apron for the distance of 38 feet from the left wing so as to break up the fall into two or three parts where the proposed retaining wall runs, at the end of 38 feet length, either stepped or sloped down to the bed of the nullah, but the circumstances of the high ground which interferes for part of the length with a free discharge must throw considerable strain on the apron, which will need to be of long stones packed at right angles to the surface of the apron and the toe of the latter will need the support of a retaining wall parallel to the crest wall.

The design may be suited to the circumstances, but the District Engineer should see to this. On the cross sections of the bund it is noted that the interior slope of the bund is intended to be made steeper than at present. This will not be advisable, neither will it probably be necessary to repack the stone lying on the flat part of the slope.

Elaya Nellore Fakcer Thangal Tank.—This tank is situated in latitude 13°, longitude 79° 16' 20". The bund has been breached and the greater part of it in length is very low and overgrown by prickly-pear brush-wood. The surplus is discharged by means of a cut at the end of the bund.

The estimate provides for—

1st.—Raising and repairing the bund, closing the breach, removing brush-wood, and turfing the front and rear slopes.

2nd.—Constructing a masonry weir.

This weir should be 50 feet in length instead of 36 feet as the maximum flood discharge will probably not be less than 280 cubic feet per second and the extra cost for this work will be met by transferring Rupees 70 from the item for turfing, which appears unnecessary. The rate for removing prickly-pear is 6 Pies a square yard, and this is too high; 4 Pies is the rate at which such work is usually done.

The following statement shows the proposed distribution of the outlay recommended for sanction to the debit of the several heads of account involved:—

HEAD OF SERVICE.—Irrigation.

FUND.—Ordinary Agricultural.

Name of System or Group.	Distinguishing Number or Letter of Group.	Name of Tank or Channel.	Description of Work.	Main Head.	Class.	Amount of each item.	Amount to be separately accounted for.
Isolated tank.	..	Tenabanda Covil Tank.	Repairing bund .. Constructing masonry weir.	Irrigation.	Repairs .. Original Works.	Rs. 560 320	Rs. 560 320
Do. ..	..	Elaya Nellore Fakcer Thangal Tank.	Repairing bund .. Constructing masonry weir.		Repairs .. Original Works.	415 260	415 260

(Signed) P. MONTGOMERIE, Major, R.E.,
Acting Deputy Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.

FORT ST. GEORGE,
25th March 1878.

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

No. 38.

ORDER THEREON, 8th April 1878, No. 308 I.

The following estimates for Irrigation works in the Chittoor Range, North Arcot District, forwarded by the Chief Engineer for Irrigation with his Memorandum marginally noted, are sanctioned:—

Name of Tank.	Description of Work.	Class.	Amount.	Irrigation Registry Number.
Tenabanda Covil Tank	Repairing bund .. Weir ..	Repairs .. Original Works ..	Rs. 560 320	1 } 19 I.
Elaya Nellore Fakcer Thangal Tank.	Repairing bund .. Weir ..	Repairs .. Original Works ..	415 260	1 } 20 I.
			675	

2. These sanctions are registered as shown above.

(True Extract.)

(Signed) JOHN MULLINS, Lt.-Col., R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

(True Copy.)

Chas. J. Jones

Major, R.E.,
Under Secy. to Govt., P.W.D.,
Irrigation Branch.

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

Encl. A. S. Rodgers.

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Spare Copies

Revenue 1878
No 1836
ENTRANCE
ACCOUNT

Govt. of (1878) ~~Public~~
PUBLIC WORKS.

By
THE SUPERINTENDING ENGINEER
NORTH ALBERT
Ac. J. C. Ac.

Dated April 30th

Amount

Recd. May 1st 1878

G. O. No. 1081 April 1878, No. 1081

APRIL

No. 3733

No. 1081

Communicated
to the Board of Revenue

Y. L. L.

22 May 1878

The Board of Revenue, North Albert
General Office, North Albert
Receipt of the same, sanctioned.

With Order

11 F. H. J. D. and J. D. (Revenue) 1878