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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

REVENUE DEPARTMENT

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29/10

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

6th November 1878, No. 901 I.

Irrigation.
Account.

Read the following papers:—

No. 40. From Lieutenant-Colonel H. L. PRENDERGAST, R.E., Officiating Superintending Engineer, North Arcot, to the Chief Engineer for Irrigation, dated Vellore, 22nd July 1878, No. 1,961.

I HAVE the honor to submit for sanction two estimates with plans and sections, amounting to Rupees 3,710, for repairing and improving the Arasoor and Thundalum tanks that are fed by the Tatray branch channel of the Cheyar Anicut System in the Wandiwash Taluk.

1 Sketch.	
2 Sections.	
2 Plans.	
4 Detailed estimates.	
4 Abstract do.	
2 Hydraulic details.	
2 Accompaniments.	

Arasoor Tank.—There were originally two independent tanks, but they are now joined into one, and the revenues of the joined tank are taken together in the ayaaut statement.

2. The bund is low throughout its whole length, and requires raising and widening. There is an irrigation sluice on a low level; its head is in ruins and must be reconstructed; a new sluice is also required on a high level in place of the old pot sluice. There is a calingulah 12 feet long, and it is proposed to raise the wings and to open two vents in the body wall, so as to allow a supply to pass on to the tank below; also to construct a flush escape 35 feet in length for the discharge of the maximum supply of 449 cubic feet per second received from the channel, as well as from the drainage area of three-quarters of a square mile.

3. *Thundalum Tank.*—A part of the original bund was found to be so leaky that another bund was thrown up some years ago in rear to catch the great quantity of water that came through. The estimate provides for raising and strengthening this rear bund and the sound portion of the original bund. There is an old sluice which is altogether dilapidated and has to be rebuilt; and another sluice being laid with earthen pipes, it is proposed to construct a proper new one. There is a small rough-stone escape, which is in such a state that it is not repairable, and it is proposed to construct a new escape 70 feet long to provide for the discharge of 769 cubic feet per second.

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

No. 297 I.

No. 40-A. *Note by the Chief Engineer for Irrigation.*

THE following estimates from the Poloor Range are forwarded by the Officiating Superintending Engineer, North Arcot, with his letter marginally noted —
No. 1,961, dated 22nd July 1878.

Taluk.	Village.	Work.	Amount.
			RS.
Wandiwash	Arasoor	V. tank	1,780
	Thundalum	V. do.	1,930
	Total		3,710

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

I.—Financial Details.

Name of Work.	Ayacut Area.	Assessment.	Average Revenue for Five Years.	Highest Revenue for Five Years.	OUTLAY.				
					During the previous Four Years.	PROPOSED			
						Ordinary Agricultural, Irrigation.			
						Original Works.	Repairs.	Average Annual Proportion of Charges to Revenue.	
	ACRES.	RS.	RS.	RS.	RS.	RS.	RS.	PER CENT.	
Arasoor tank	68	377	412	470	None.	615	1,165	85.4	
Thandalum tank	61	358	352	353	Do.	1,015	915	105.6	
Total ..	129	735	764	823	..	1,630	2,080	97.1	

II.—Hydraulic Details.

Name of Work.	Catchment Basin Area.		MAXIMUM SUPPLY.		LENGTH OF ESCAPE.		AVERAGE HEIGHT OF BUND.		Surplus discharged at M.W.L. per Second.	Tanks above.	Area irrigated per Square Mile of Drainage.
	Sq. M.	C. FT.	per Second.	per Channels Second.	Total.	Effective.	Above F.T.L.	Above M.W.L.			
Arasoor tank	0.75	369	80		C 12	9	1.91	0.09 below.	238.0	None.	59.0
Thundalum tank	1.5	689	80		W 35 W 12 S 11.25 W 70	47 11.25 18 70	4.00 0.25 1.75 2.00	2.00 1.75 1.41 2.00	550.7 141.0 665.2	.. 1 ..	.. 39.9 ..

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:—C—Calingulah with dam stones. W—Weir with overfall. E—Escape at ground level. B—Bund of tank. V—Village. S—Surplus sluice vent area.

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

Arasoor Tank.—Formed by the conjunction of two distinct tanks, the revenues of which are shown collectively in the ayacut statement.

The bund of this tank is low and weak throughout; the head of the low level irrigation sluice is in a ruined condition and needs to be reconstructed; a high level sluice is required to replace the old pot sluice which was found to be very insufficient causing a considerable wastage of water, and the existing calingulah is insufficient to discharge the surplus waters of the tank.

The estimate provides for—

- 1st.—Raising and repairing the bund and turving the water slope.
- 2nd.—Reconstructing the head of the masonry irrigation sluice.
- 3rd.—Converting the calingulah into a weir by raising the body and wing walls and for forming and fitting with shutters two notches each 2.25×2.5 in the body wall to pass the channel supply into the lower tank.

4th.—Constructing a masonry weir.

5th.—Constructing a masonry irrigation sluice to replace the pot sluice.

Thundalum Tank.—This tank is situated in latitude $12^{\circ} 36' 30''$ longitude $79^{\circ} 37' 20''$, and is one of the sub-group of the Tatrav branch channel of the Cheyar Anicut main channel. The central portion of the bund of this tank was found to be so porous and leaky that it was necessary to form another bund in rear of it; both of these bunds are low and weak and need to be raised and strengthened.

The tank has two irrigation sluices, a masonry sluice which is in ruins, and a pot sluice which cannot be regulated. The rough-stone escape is also in a bad state, and the tank has to be relieved by means of cuts made in the bund, and the flow of water through these cuts has undermined the ground to such an extent that it is not safe to retain the full supply.

The estimate provides for—

- 1st.—Raising and repairing the bund and turving the water slope.
- 2nd.—Reconstructing the irrigation sluice.
- 3rd.—Constructing a masonry sluice to replace the pot sluice.
- 4th.—Constructing a masonry weir.

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.
Main Group.—Tatrav branch channel of the Cheyar Anicut System. Sub-Group.—Thundalum tank.	2	Arasoor tank	Constructing a masonry weir.	Irrigation	Original Works.	190	615
			Constructing a masonry irrigation sluice.		Do.	425	
			Improvements to calingulah.		Repairs	35	1,165
			Reconstructing head of irrigation sluice.		Do.	420	
			Repairing bund.		Do.	719	
	1	Thundalum tank.	Constructing a masonry weir.		Original Works.	380	1,015
			Constructing a masonry irrigation sluice.		Do.	240	
			Reconstructing an irrigation sluice.		Do.	395	915
			Repairing bund		Repairs	915	

FOR ST. GEORGE,
21st October 1878.

(Signed)

P. MONTGOMERIE, Major, R.E.,
Ag. Dy. Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.

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

4 PUBLIC WORKS DEPARTMENT, 6TH NOVEMBER 1878, No. 901 I.

No. 41. ORDER THEREON, 6th November 1878, No. 901 I.

THE following estimates for irrigation works in the Poloor Range, North Arcot District, forwarded by the Chief Engineer No. 297 I, dated 21st October 1878. for Irrigation with his memorandum marginally noted, are sanctioned:—

Head of Service—IRRIGATION.

Name of System or Group.	Name of Tank.	Description of Work.	Class.	Amount.	Irrigation Register No.
Main Group.—Thiruvannamalai branch channel of the Cheyur Ancient System. Sub-Group.—Thundalam tank.	Arasoor tank.	Masonry weir	Original Works.	Rs. 190	1
		Masonry irrigation sluice	Do.	425	
		Total		615	
		Converting callingulah into weir	Repairs	35	2
		Reconstructing head of sluice	Do.	420	
		Repairing bund	Do.	710	
	Thundalam tank.	Total		1,165	1
		Masonry weir	Original Works.	380	
		Masonry irrigation sluice	Do.	240	
		Reconstructing an irrigation sluice	Do.	395	2
		Repairing bund	Repairs	915	

2. These sanctions are registered as shown above.

(True Extract.)

As at

Lt.-Col., R.E.,
Ag. Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

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

Exd. T. D. Ryan.

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