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MADRAS RECORD OFFICE

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Revenue DEPARTMENT

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*Proceedings of the Madras Government, Public Works Department,
6th March 1876.*

Read the following:—

No. 140.

No. 57. *Note by the Chief Engineer for Irrigation.*

The following estimates from the Suroolloor Range are forwarded by the Superintending Engineer, Chingleput, with his letter marginally noted:—

Taluq.	Estimate No. 187	Work.	Amount.
Ponnary ...	...	Panapakum Tank ...	RS. 1,370
	...	Kulpaukum Chittary Tank ...	430
	...	Punjutty Tank ...	500
	...	Arancee Tank ...	2,245
	...	Old Goomadypoondy Tank ...	755

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 5 years.	Highest Revenue for 5 years.	Expenditure during previous 4 years.	AMOUNT OF ESTIMATE.		
						Capital.	Revenue.	Total.
Panapakum Tank ...	ACRES.	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Kulpaukum Chittary Tank ...	214.9	878	707	802	89	130	1,240	1,370
Punjutty Tank ...	55	243	231	232	34	80	350	430
Arancee Tank ...	67.5	327	207	360	95	...	500	500
Old Goomadypoondy Tank ...	553	2,500	2,300	2,400	898	130	2,115	2,245
	137.7	415	434	440	76	...	755	755

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 Sec.	Tanks above.
		Catchment per Second.	Channels per Second.	Total.	Effective.	Above F.T.L.	Above M.T.L.		
Panapakum Tank ...	SQ. M.	C. FT.	C. FT.	FT.	FT.	FT.	FT.	C. FT.	No.
Kulpaukum Chittary Tank ...	2.5	1,036	Not stated.	E 168	168	2	.5	0.0	Not stated.
Punjutty Tank ...	.75	404	Do.	E 75	75	1.75	.25	691.2	Do.
Arancee Tank ...	2	893	Do.	E 145	145	3	1.5	231.4	Do.
Old Goomadypoondy Tank ...	1.5	737	Do.	C 33	29	2.25	.75	0.0	Do.
				W 331		3	1.5	447.4	Do.
				E 45	78	2.87	.87	261.1	Do.
	2.25	966	Do.	E 78	78	5	3	527.4	Do.
						4.25	1.75	0.0	Do.
						5.5	3	517.9	

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.—Casingulah with dam stones, W.—Weir with flush crest, E.—Escape at ground level. B.—Band of tank.

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

Panapakum Tank.—The bund was damaged and breached by the overflow of the Naranaveram river, and it is to be repaired and raised, and an escape at ground level is proposed. There being no sluice, one with a vent of 255 square inches is to be provided.

Kulpaukum Chittary Tank.—The bund has been breached and eroded and there is no sluice. The former is to be repaired, raised, and sectioned, a sluice with a vent of 255 square inches is to be built, and a natural escape improved.

Punjutty Tank.—The bund has been breached and the estimate provides for the necessary repair, and for raising, sectioning and turfing, and for an escape.

Arancee Tank.—The tank was breached by the overflow of the Naranaveram river. It is to be repaired and sectioned, the calingulah body is to be raised to F.T.L., and the dam stones removed. The apron also is to be repaired and a new sluice provided.

Old Goomadypoondy Tank.—The embankment which was damaged by a cyclone is to be sectioned and turfed.

4. In regard to the proposals described above, the following observations are necessary:—

The escape for the Panapakum tank is to be 168 feet in length, and with a free over-fall it would discharge the drainage from the catchment area, but the nature of the work would not provide this condition, and the length of the opening might be lengthened with advantage. The same observation applies to the case of the Punjutty tank escape which, moreover, is to be planted with grass, the effect being to still further reduce the coefficient of discharge. The circumstances are similar in the Arancee tank, and generally when the relief of the tank depends on what are called natural escapes wholly or partially, and especially when these are planted the length required will be considerably in excess of that derived from the table printed with circular 66/2 where regard is only paid to the head on the crest of the escape, and that again is assumed to be the difference in level between M.T.L. and the crest. As a practical recognition of the facts, and in the absence of data, it is desirable after abstracting the length in the tables attached to circular 66/2 to add one-half more in the case of a rough-stone escape at ground level, and to double the tabular length for an escape planted with grass.

The irrigation sluices proposed for the Panapakum and the Kulpaukum Chittary tanks require modification, and it will be necessary to return the plans for revision with reference to the remarks in this office memorandum, No. 223, of the 21st February 1876. The alterations are not of great moment and the estimates may be sanctioned as they stand.

FORT ST. GEORGE,
2nd February 1876.

(Signed) A. DEC. SCOTT, Major, R.E.,
Asst. Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.

*Proceedings of the Madras Government, Public Works Department,
6th March 1876.*

No. 58.

ORDER THEREON, 6th March 1876, No. 591.

IRRIGATION, No. 3.
Account.

No. 140, of 2nd February 1876.

The following estimates for Irrigation Works in the Suroolloor Range, Chingleput District, forwarded by the Chief Engineer for Irrigation with his memorandum marginally noted, are sanctioned:—

Name of Work,	Provision of Estimate.	Fund.	Amount.	Irrigation Registry No.
			RS.	
Panapakum Tank ...	Repairing bund...	Revenue (Repairs.)	1,240}	No. 18 I. of 1875-76
Do. ...	Irrigation sluice.	Capital Ordinary.	130}	
Kulpaukum Chittary Tank.	Repairing bund...	Revenue (Repairs.)	350}	No. 19 I. of do.
Do. ...	Irrigation sluice.	Capital Ordinary.	80}	
Punjutty Tank ...	Repairing bund...	Revenue (Repairs.)	500	No. 20 I. of do.
Arancee Tank ...	Do. ...	Do. ...	2,115 }	No. 21 I. of do.
Do. ...	Irrigation sluice.	Capital Ordinary.	130 }	
Old Goomadypoondy Tank.	Repairing bund...	Revenue (Repairs.)	755	No. 22 I. of do.

2. The remarks of the Chief Engineer relative to the alterations in the length of escape and the sluices should be duly attended to.

3. The above sanctions have been registered as noted against each work.

(True Extract.)

Comptroller Major-General, R.E.,
Secretary to Government.

To the District Engineer, Chingleput.

" Collector of
" Chief Engineer for Irrigation.
" Examiner of Public Works Accounts.
" Revenue Department.

Exd. E. C. Shunker.

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