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MADRAS RECORD OFFICE

GOVERNMENT OF MADRAS

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 Surooloor Range are forwarded by the Superintending Engineer, Chingleput, with his letter marginally noted:—

No. 3,716, dated 2nd December 1875.

Talug.	Estimate No. 187	Work.	Amount.
Ponnary ...	...	Panapakum Tank ...	RS. 1,370
	...	Kulpakum Chittary Tank ...	430
	...	Punjatty Tank ...	500
	...	Arahee 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.
Kulpakum Chittary Tank ...	214.9	873	707	802	89	130	1,240	1,370
Punjatty Tank ...	55	243	231	233	34	80	350	430
Arahee Tank ...	67.5	827	207	360	95	...	500	500
Old Goomadypoondy Tank ...	553	2,500	2,500	2,400	893	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.
Kulpakum Chittary Tank ...	2.5	1,086	Not stated.	...	...	2	.5	6.0	Not stated.
Punjatty Tank ...	.75	464	Do.	E 163	163	4	2.5	691.2	
Arahee Tank ...	2	893	Do.	E 75	75	1.75	.25	0.0	Do.
Old Goomadypoondy Tank ...	1.5	737	Do.	E 145	145	3	1.5	231.4	Do.
	2.25	966	Do.	C 33	...	2.25	.75	0.0	Do.
				W 331	...	3	1.5	447.4	Do.
				E 45	78	2.87	.87	261.1	Do.
				E 78	78	5	3	527.4	
						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.—Calingalah with dam stones, W.—Weir with flush crest, E.—Escape at ground level. B.—Bund 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 turving, and for an escape.

Arance 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 Arance 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.
Arance 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 Ex' t.)

James 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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Revenue Department
No 1181

Govt. of Madras
PUBLIC WORKS.

THE PUBLIC WORKS DEPARTMENT,
CHENNAI.

For the Govt.

March 20/76

G. O. No. 1000, No. 1000.

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Mar. 27-76

Sir,

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