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MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

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Dated	6.3.		1876.

Not to be folded or roughly handled

*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:—

Taluq.	Estimate No. 187	Work.	Amount.
Ponnary ...	...	Panapakum Tank ...	RS. 1,370
	...	Kulpaukum Chittary Tank ...	430
	...	Punjutty Tank ...	500
	...	Aranee 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.	Ayaat 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	873	707	802	89	130	1,240	1,370
Punjutty Tank ...	55	213	231	232	34	80	350	430
Aranee 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. Not stated.
Kulpaukum Chittary Tank ...	2.5	1,036	Not stated.	...	...	2	.5	0.0	...
Punjutty Tank ...	.75	464	Do.	E 168	168	4	2.5	691.2	Do.
Aranee 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	29	2.25	.75	0.0	Do.
				W 331	...	3	1.5	447.4	Do.
				E 451	78	5	3	527.4	Do.
				E 78	78	5.5	3	517.9	Do.

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 flush crest, E.—Escape at ground level, B.—Bund of tank.

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

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.

Arahee 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 Arahee 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. DE C. 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.
Arahee 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.)

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.

Spare Copies

Salt Lake, Madras 2nd February 1876.

N. 140

Note by the Chief Engineer for Irrigation.

No. *3716*

Dated *2nd Decr* 1876.

Encls 31

THE following Estimates from the *Suroolam* Range are forwarded by the *Superintending* Engineer *Chingleput* with his letter marginally noted:—

Taluq.	Estimate No.	Work.	Amount. Rs.
<i>Primary</i>	<i>187</i>	<i>Panapaikam Tank</i>	<i>1370</i>
		<i>Kulpankum Chit.</i>	
		<i>Tary Tank</i>	<i>4301</i>
		<i>Punjatty Tank</i>	<i>500</i>
		<i>Brance Tank</i>	<i>2245</i>
		<i>Old Comady pondy</i>	
		<i>Tank</i>	<i>755</i>

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. Acres.	Assessment. Rs.	Average Revenue for 5 years. Rs.	Highest Revenue for 5 years. Rs.	Expenditure dur- ing previous 4 years. Rs.	Amount of Estimate		
						Capital. Rs.	Revenue. Rs.	Total. Rs.
<i>Panapaikam Tank</i>	<i>2147</i>	<i>873</i>	<i>707</i>	<i>802</i>	<i>87</i>	<i>430</i>	<i>1240</i>	<i>1370</i>
<i>Kulpankum Chit.</i>	<i>55</i>	<i>243</i>	<i>231</i>	<i>232</i>	<i>54</i>	<i>80</i>	<i>350</i>	<i>430</i>
<i>Tary Tank</i>								
<i>Punjatty Tank</i>	<i>675</i>	<i>327</i>	<i>207</i>	<i>360</i>	<i>95</i>		<i>500</i>	<i>500</i>
<i>Brance Tank</i>	<i>553</i>	<i>2500</i>	<i>2300</i>	<i>2400</i>	<i>898</i>	<i>130</i>	<i>2115</i>	<i>2245</i>
<i>Old Comady pondy</i>	<i>1377</i>	<i>415</i>	<i>434</i>	<i>440</i>	<i>76</i>		<i>755</i>	<i>755</i>
<i>Tank</i>								

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.
	Sq. M.	C. ft.	C. ft.	C. ft.	Ft.	Ft.	Ft.	Ft.		
Panapathum Tank	2.5	1036	1036	1036	nil	nil	2	0.5	0.0	10
Kulpankum Chittay Tank	7.5	464	464	464	nil	nil	1.75	2.5	0.0	1
Pungitthy Tank	2	893	893	893	nil	nil	2.25	0.75	0.0	3
Arana Tank	1.5	737	737	737	0.33	29	2.07	0.87	26.1	1
Old Comadypondy Tank	2.25	966	966	966	nil	nil	4.25	1.75	0.0	3

Note.—The proposed dimensions of escapes and heights of bund are entered in red. The existing dimensions in black. In the MS. the entries in red denote proposed dimensions. The following abbreviations are used:—C.—Calingulab with dam stones. W.—Weir with flush crest. E.—Escape at ground level. B.—Bund of tank.

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

Panapathum Tank.—The bund was damaged and breached by the overflow of the Varanavaram 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.

Kulpankum Chittay Tank. The bund has been breached and eroded and there

is no sluice. The dam 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.

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

Arana Tank.—The tank was breached by the overflow of the Varanavaram river. It is to be repaired and sectioned, the Calingulab 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 Comadypondy 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 Panapathum Tank is to be 160 feet in length, and with a

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 Pungitly 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, where the relief of the tank depends on what are called natural escapes, wholly or partially, and especially where 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

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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 schemes proposed for the Panapattum and the Kulpattum Chittay Sanks 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.

Asst. Secy. Major R.E.
C. P. Ch. L. P. V. T.
For Chief Engineer for Irrigation.

The Secretary to Government.
Public Works Department

W.S.

Current No. 1535

From

The Chief Eng.
for Irrig.

No. 140

Dated 2

Recd. 29

Feb:

1876.

Subject:-

Note on Estimates
for the repairs of certain
Tanks in the Surroor Range,
Chingleput Dist.

ENCLOSURES. 3/

From

to

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Orders and Proceedings in file.

Depart- ment.	No.	Date.	ENDORSEMENTS.		
			Depart- ment.	No.	Dated.

16 March 1876

No 591 Public Works Dept
Proceedings of the Madras Government

Under date the 6th March 1876

Read the following:-

From
The Chief Engineer
for Irrigation

(H. No 140 dt 2 Feb 1876)

The following Estimates for Irriga-
tion Works in the Surroor Range,
Chingleput District, forwarded
by the Chief Engineer for Irrigation
with his Memorandum margin-
ally noted, are sanctioned.

No 140 dt 2 February 1876

Name of Work.	Particulars of Estimate.	Fund	Amount.	Irrigation Registry
Pannapattam Tank.	Repairing bund.	Revenue (repairs)	1240	No 18 dt 1876
do.	Irrigation sluice.	Capital-Ordinary	130	
Kulpattam Chitany Tank.	Repairing bund.	Revenue (repairs)	350	No 19 do
do.	Irrigation sluice.	Capital-Ordinary	80	
Punjatty Tank.	Repairing bund.	Revenue (repairs)	500	No 20 do
do.	do	do	2115	
Arance Tank.	Irrigation sluice.	Capital-Ordinary	130	No 21 do
do.	Repairing bund.	Revenue (repairs)	755	
Old Gornady pondy Tank.				

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

duly attended to.

Aug 8

GMW

The above cautions
have been registered as
noted against each
work.

J. E. Chingapahy -
Collector - do -
Ch. E. for J. E. with 31
Ex. P. W. R.
Ren. Sept.
Repd - 20-3-76

Exm 2-3-76.

duly attended to.

Ames

Ames

See above sanctions

1588

Govt. of 1870 Madras.

PUBLIC WORKS.

To
The St. Engineer
Chingleput

Patd

Issd

Recd

Encl.

G. O. 6 March 70, No. 591

Nos. 57-58

Report to Certain Limits
in The Secunder Range,
Chingleput Dist —
Estimated for — Sanctions