

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	1278 (9)	Press Mis.
Dated	14-4-	1877.

Not to be folded or roughly handled

Read the following :—

No. 164—W.

No. 336. *Note by the Chief Engineer for Irrigation.*

THE following estimates from the No. 3 or Chingleput Range are forwarded by
the Superintending Engineer, Chingleput,
No. 3,982, dated 16th February 1877. with his letter marginally noted :—

Taluq.	Village.	Work.	Amount.
			RS.
Madranticum ...	Sittalamangalum, S. No. 243 ...	V. large tank ...	585
Do. ...	Surai, S. No. 324 ...	Vanian small tank ...	370
Do. ...	Pennalur, S. No. 10 ...	V. tank ...	1,115
Do. ...	Sottupakkam, S. No. 194 ...	V. " ...	825
Do. ...	Tiruvelicheri, S. No. 194 ...	V. " ...	450
		Total ...	3,345

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.	OUTLAY.			
					During the previous 4 Years.	PROPOSED ORDINARY AGRICULTURAL, IRRIGATION.		
						Original Works.	Repairs.	Average Annual Proportion of Charges to Revenue.
	ACRES.	RS.	RS.	RS.	RS.	RS.	RS.	PER CENT. RS.
Sittalamangalum large tank ...	88	257	228	254	61	...	492	48.5
Surai Vanian small tank ...	40	124	139	153	40	...	325	52.5
Pennalur tank ...	123	510	556	583	Nil.	255	580	30.0
Sottupakkam tank ...	45	219	226	270	151	...	825	86.3
Tiruvelicheri tank ...	88	270	148	176	Nil.	...	450	60.8
Total ...	384	1,380	1,297	1,436	252	255	2,672	49.90

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 second.	Tanks above.
		Catchment per second.	Channels per second.	Total.	Effective.	Above F.T.L.	Above M.T.L.		
Sittalamangalum large tank.	SQ. M.	C. FT.	C. FT.	FT.	FT.	FT.	FT.	C. FT.	No.
Surai Vanian small tank	0.75	464	..	E 6	6	3.0	1.5	30.5	Not stated.
Pennalur tank	0.75	404	..	E 150	150	4.0	2.5	462.9	..
Sottupakkam tank	1.5	737	..	E 150	150	4.0	2.5	462.9	3
Tiruvolicheri tank	0.75	464	..	Nil.	Nil.	3.0	1.0	0.0	Not stated.
	0.5	354	..	E 117	117	4.5	2.5	740.0	..
				E 45	45	3.0	1.5	229.0	..
				E 150	150	4.0	2.5	462.9	..
				Nil.	Nil.	2.5	1.0	0.0	..
				E 115	115	4.0	2.5	354.8	..

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.—Culingul with dam stones. W.—Weir with flush crest. E.—Escape at ground level. B.—Bund of tank. S.—Revenue Survey. V.—Village.

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

Sittalamangalum Large Tank.—This tank is situated in the catchment ground of the Surai large tank, latitude $12^{\circ} 33'$, longitude $79^{\circ} 54'$, and was damaged by the floods in 1872. The tank was repaired, but subsequently (1874) it was damaged a second time by floods and patched up by the ryots.

The catchment basin compared with the ayacut appears inadequate, but the cultivation is that known as "kara," which needs less water and comes to maturity sooner than the "shamba paddy."

The estimate provides for raising and repairing the bund, protecting the front slope with a belt of kuskus up to M.W.L. and with turf above that level, removing a portion of the bund to form an escape and planting the surface of the escape with kuskus grass, and repairing two irrigation sluices.

The estimate is recommended for sanction, less the provisions for turfing and for the portion of the kuskus planting between F.T.L. and M.W.L., the total amount being thereby reduced to Rupees 492.

Surai Vanian Small Tank.—This tank is also situated in the catchment basin of the Surai large tank, latitude $12^{\circ} 34' 0''$, longitude $79^{\circ} 55' 0''$, and was damaged by floods in 1872. The tank was repaired, but was breached in 1874, the ryots closed the breach.

The estimate provides for raising and repairing the bund, planting the inner slope with kuskus up to M.W.L., and turfing above that level, repairing an irrigation sluice, and for closing the existing escape and forming a grass planted escape.

The estimate is recommended for sanction, less the provision for turfing and for the portion of kuskus planting between F.T.L. and M.W.L., the total amount being thereby reduced to Rupees 325.

Pennalur Tank.—This tank is situated in latitude $13^{\circ} 34' 0''$, longitude $79^{\circ} 45' 0''$, and was breached by the floods of 1874. The tank was repaired on emergency at a cost of Rupees 54, which is included in the estimate now submitted for sanction.

The estimates provide for raising and repairing the bund, securing the front slope with kuskus up to M.W.L. and turf above that level, repairing an irrigation sluice and reconstructing another, and for constructing a rough stone escape.

The repair estimate is recommended for sanction less the provision for turfing* and for the portion of kuskus planting between F.T.L. and M.W.L., the total

* Rupees 35-12-6.

amount being thereby reduced from Rupees 670 to Rupees 580.

The District Engineer should have sanctioned the emergent estimate for Rupees 54 himself at the time. This expenditure has all this while been uncovered by any sanction.

This tank is the last of a group of four. The repairs of the second of the group* were sanctioned in G.O., No. 2,905, dated 11th October 1875, and for it a

* Nanampoodi Tank.

grass planted escape of 150 feet in length was provided. It should be stated whether there are efficient escapes in the first and third of the group (the Karanai and Ammyappa Nullur Tanks), and, if not, estimates should be at once submitted for forming them.

The plan and estimate for the surplusings arrangements of the tank now under notice are for a rough stone escape 117 feet long. This length has been arrived at by the use of coefficient .418, but unless some special local features make the use of this coefficient advisable, the higher one of .518 would allow for the full length of escape that is necessary and would reduce it to 95 feet effecting a saving of Rupees 45. The estimate, Rupees 255, is recommended for sanction.

The design for the irrigation sluice is unsuitable in some particulars, notably in the size of the tunnel being so small as to preclude the possibility of interior inspection, a type design for a sluice of the kind required is being sent to the District Engineer, and from it he should prepare and submit a revised plan and estimate suited to the site for this work.

Sottupakkam Tank.—This tank is situated in the catchment basin of the Mambakkam Tank, latitude $12^{\circ} 27' 0''$, longitude $79^{\circ} 53' 0''$, and surpluses into the Sirunagalur Tank.

The tank was badly damaged by the floods of 1872 and was repaired, but the bund is now in bad order. The surplus escapes through two breaches, one at the north and the other at the south end of the bund.

Teruvolicheri Tank.—This tank is another of the group connected with the Mambakkam Tank, latitude $12^{\circ} 28' 0''$, longitude $79^{\circ} 56' 0''$, and has not been repaired for upwards of 25 years, the bund is much eroded and otherwise damaged. The tank has no surplusings work and the surplus escapes round the ends of the bund.

These last two tanks are shown with the same survey number to each, which seems to be a mistake. They are evidently distinct tanks though belonging to the same group.

The estimates for them cannot be recommended for sanction, as the necessary information about the other tanks of the group has not been supplied. In resubmitting these estimates the District Engineer should be careful that all the information which circular No. 63 lays down as required is supplied.

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

No. 164 W. Fort Saint George, 27 March 1877.

Note by the Chief Engineer for Irrigation.

No. 3982
Dated 16 Feb. 1877.
Enclosures 25-

The following Estimates from the No. 3 or Chingleput Range are forwarded by the Superintending Engineer Chingleput with his letter marginally noted:—

Taluq.	Village.	Work.	Rs.	Amount.
Madrauticum	Sittalamangalum	S. No. 243 V. Tank	585	
Do	Surai	S. No. 324 Vanian Small Tank	370	
Do	Pennalur	S. No. 10 V. Tank	1115	
Do	Tottupakkam	S. No. 194 V. Tank	825	
Do	Tiruvulicheri	S. No. 194 V. Tank	450	
Total Rupees			3345	

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.	During the previous 4 years.	OUTLAY		
						Original Works	Repairs	Average annual proportion of Charges to Revenue.
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sittalamangalum large tank	88	257	228	234	61	492	48.5	
Surai Vanian small tank	40	124	139	153	40	325	52.5	
Pennalur tank	123	510	556	583	111	580	30.0	
Tottupakkam tank	45	219	226	270	151	825	86.3	
Tiruvulicheri tank	88	270	148	176	Nil	450	60.8	
Total	384	1380	1297	1436	252	255	2672	49.90

Proceedings of the Madras Government, Public Works Department,
14th April 1877. No. 1,278.

Name of Tank.	Items of Estimate.	FUND, ORDINARY AGRICULTURAL, IRRIGATION.		Total for each Tank, &c.
		Original Works.	Repairs.	
Sittalamangalum large tank.	Raising and repairing the bund, repairing two Irrigation sluices and forming an escape planted with kuskus	...	492	492
Surai Vanian small tank.	Raising and repairing the bund, repairing the Irrigation sluice and forming an escape planted with kuskus	...	325	325
Pennalur tank	Raising and repairing the bund, also repairing an Irrigation sluice... Constructing a loose stone escape	255	580	835

FORT ST. GEORGE,
27th March 1877.

(Signed) G. T. WALCH,
Ag. Dy. Chief Engineer for Irrigation,
for Chief Engineer for Irrigation.

To the Secretary to Government, Public Works Department.

No. 337. ORDER THEREON, 14th April 1877, No. 1,278.

IRRIGATION, No. 25.

Account.

No. 164—W, dated 27th March 1877.

The following estimates for Irrigation Works in the No. 3 or Chingleput Range, Chingleput District, forwarded by the Chief Engineer for Irrigation with his memorandum marginally noted are sanctioned:—

Name of Work.	Item of Estimate.	Fund, Ordinary Agricultural, Irrigation.	Amount	Irrigation Registry No.
Sittalamangalum large tank.	Repairing bund and two sluices and forming an escape	Repairs...	492	8-I.
Surai Vanian small tank.	Repairing bund and sluice and forming an escape	Do. ...	325	9-I.
Pennalur tank.	Repairing bund and sluice	Do. ...	580	10-I.
	Escape	Original Works.	255	2

2. These sanctions are registered as shown above.
(True Extract.)

Lieut.-Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Irrigation Branch.

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

Exd. E. C. Shunker.
Spare Copies

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.	Total.	Effective.	Above F. T. L.	Above M. T. L.			
								C. ft.		
Sittalamangalam Large Tank 0.75 464				E 6	6	3.0	1.5	36.5	1.1	
Surai Vanian, small tank 0.75 464				E 7.5	7.5	2.5	1.0	38.5		
Pennalur Tank - 1.5 737				Kil	Kil	3.0	1.0	0.0		3
Sottupakkam Tank 0.75 464				E 4.5	4.5	3.0	1.5	37.0	1.1	
Sirivellicheri Tank 0.5 354				Kil	Kil	2.5	1.0	0.0		

NOTE.—The proposed dimensions of escapes and heights of bund are entered in red. The existing dimensions in black. The following abbreviations are used:—K.—Kalingulah with dam stones. W.—Weir with flash crest. E.—Escape at ground level. B.—Bund of tank. S.—Revenue Survey. T.—Village.

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

Sittalamangalam Large Tank— This tank is situated in the catchment ground of the Surai large tank lat. $12^{\circ} 35'$ Long. $79^{\circ} 55'$ and was damaged by the floods in 1872. The tank was repaired but, subsequently, (1874) it was damaged a second time by floods and patched up by the ryots. The catchment basin compared with the adjacent appears inadequate, but the cultivation is that known as "Kara" which needs less water, and comes to maturity sooner than

than the "Shamba paddy."

The estimate provides for raising and repairing the bund, protecting the front slope with a belt of Kuskus up to M. T. L. and with turf above that level, removing a portion of the bund to form an escape and planting the surface of the escape with Kuskus grass, and repairing two irrigation sluices.

The estimate is recommended for sanction less the provisions for turping and for the portion of the Kuskus planting between F.T.L. & M.T.L. ^W the total amount being thereby reduced to Rs 492.

Surai Vanian Small Tank— This tank is also situated in the catchment basin of the Surai large tank lat. $12^{\circ} 34' 0''$ Long. $79^{\circ} 55' 0''$ and was damaged by floods in 1872. The tank was repaired but was breached in 1874, the ryots closed the breach.

The estimate provides for raising and repairing the bund, planting the inner slope with Kuskus up to M. T. L. and turping above that level, repairing an irrigation sluice, and for closing the existing escape and forming a grass planted escape.

The

The estimate is recommended for sanction, less the provision for turping & for the portion of Kuskus planting between F.T.L. & M.F.L. the total amount being thereby reduced to Rs 325.

Perinallur Tank - This tank is situated in Lat. $15^{\circ} 34' 0''$ Long. $79^{\circ} 45' 0''$ and was breached by the floods of 1874. The tank was repaired on emergency at a cost of Rs 54 which is included in the estimate now submitted for sanction.

The estimates provide for raising and repairing the bund, securing the front slope with Kuskus up to M.F.L. and turf above that level, repairing an irrigation sluice and reconstructing another, and for constructing a rough stone escape.

The Repair Estimate is recommended for sanction less the provision for turping and for the portion of Kuskus planting between F.T.L. & M.F.L. the total amount being thereby reduced from Rs 670 to Rs 580.

The District Engineer should have sanctioned the emergent estimate for

for Pappas 54 himself at the time. This expenditure has all this while been uncovered by any sanction.

This tank is the last of a group of 4. The repairs of the 2^d of the group were sanctioned in G.O. 2905 dated 11th October 1875 and for it a grass planted escape of 150 feet in length was provided. It should be stated whether there are efficient escapes in the 1st & 3rd of the group (the Karanai & Ammayappa Nallur tanks) and if not estimates should be at once submitted for forming them.

The plan and estimate for the surplusing arrangements of the tank now under notice are for a rough stone escape 117 feet long. This length has been arrived at by the use of coefficient .418 - but unless some special local features make the use of this coefficient advisable - the higher one of .518 would allow for the full length of escape that is necessary and would reduce that to 95 feet effecting a saving of Rs 45 - The Estimate Rs 255 is recommended for sanction.

The design for the Irrigation sluice is unsuitable in some particulars notably in

* Rs 35.12.6

in the size of the tunnel being so small as to preclude the possibility of interior inspection, a type design for a sluice of the kind required is being sent to the District Engineer, and from it he should prepare and submit a revised plan & estimate suited to the site for this work.

Sottupakkam Tank - This tank is situated in the catchment basin of the Mambakkam tank Lat: 12.27.0" Long 79.53.0" and surpluses into the Pirunagalam Tank.

The tank was badly damaged by the floods of 1872 and was repaired, but the bund is now in bad order. The surplus escapes through two breaches one at the North and the other at the South end of the bund.

Servvelicheri Tank - This tank is another of the group connected with the Mambakkam tank Lat 12.28.0" Long 79.56.0" and has not been repaired for upwards of 25 years, the bund is much eroded & otherwise damaged. The tank has no surplusage work and the surplus escapes round

the ends of the bund.

These last two tanks are shown with the same survey number to each which seems to be a mistake. They are evidently distinct tanks though belonging to the same group.

The estimates for them cannot be recommended for sanction as the necessary information about the other tanks of the group has not been supplied. In resubmitting these estimates the District Engineer should be careful that all the information which circular No 63 lays down as required, is supplied.

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

Name of Tank.	Items of Estimate	Fund - ordinary Agricultural Irrigation		Total for each tank
		original work	Repairs	
Sittalamangalam large Tank -	Raising & repairing the bund, repairing two irrigation sluices and forming an escape planted with kush.		492	492
	Raising			

Surai Vanian Small tank	Raising & repairing the fund, repairing the irriga- tion sluice & forming an escape planted with trees	325	325
Pannalur Tank.	Raising & repairing the fund, also repairing an irrigation sluice	580	
	Constructing a loose stone escape	255	835

Enclosed

By Dy. Chief Engineer for Irrigation
For Chief Engineer for Irrigation

The Secretary to Govt.
P. W. D.

Ch. E.

Irrigation

P.W.D.
1877-7 APR 77

From
The Chief Engineer, Irrigation

E. I. Form No. 3.

No. 1278 dt 14 April 1877
Actd

THE following Estimates for Irrigation
works in the *N^o 3 or Chingleput* Range,
Chingleput District, forwarded by the
Chief Engineer for Irrigation with his Memo.
marginally noted are sanctioned:—

No. 164. W
dated 27th March 1877.

Name of Work.	Item of Estimate.	Fund. <i>Ordinary or Special</i> <i>Local - Union</i>	Amount	Irrigation Registry No.
<i>Sittalamangalam</i> <i>large tank</i>	<i>Repairing bund</i> <i>two sluices &</i> <i>forming an escape</i>	<i>Repairs</i>	<i>492</i>	<i>8. I</i>
<i>Surai Vaniam</i> <i>small tank</i>	<i>Repairing bund</i> <i>sluice & forming</i> <i>an escape</i>	<i>Repairs</i>	<i>325</i>	<i>9. I</i>
<i>Pinnalpur</i> <i>tank</i>	<i>Repairing bund</i> <i>and sluices</i>	<i>Repairs</i>	<i>580</i>	<i>10. I</i>
	<i>Escape - -</i>	<i>Original Works</i>	<i>255</i>	<i>2</i>

Dated 27 March 1877
Recd. 7 April 1877

Encl. 25.

N^o 164-W.

Tank Repair - Chingleput District
- Not submitting for sanction, with
remarks, certificate for N^o 165 for repairs
to the Sittalamangalam, Surai & Pinnalpur
tanks & stating that the estimates
for the Sittalamangalam & Pinnalpur tanks
require revision.

2. These sanctions are
registered as shown
above

S. I. Chingleput
Collector do
with 7. E

by 9/4

Dis/12 3.5.77

L.O. 14 April 77 L.B.R. 336

En 10-4-77

1030
Govt. of India
PUBLIC WORKS.

To *Mr. J. B. Chingleput*
18/1

Dated

Issued

Recd.

Encl.

G. O., 14th April 1877, No. 1278

Nos. 336-337

Lanks, Chingleput Dist
The estimates amounting
to Rs 16.52 for repairs & on
to certain —, sanctioned

But no pay.