M.R.O. 1—77,006—3-6-37.

(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. 1386 (9) Press Mis.

Dated 23-4-1877.

Not to be folded or roughly handled

Read the following :—

No. 180 W.

No. 538. *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	Sirunagalur, S. No. 196	V. small tank ...	520
Do.	Do. do.	V. large tank ...	645
Do.	Perambakkam, S. No. 82	V. large and Chittary tanks.	3,220
Do.	Sinna Vemmani, S. No. 360 ...	V. large tank ...	685
Do.	Do. do. ...	V. small tank ...	355
		Total ...	5,425

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 Charge to Revenue.
	ACRES.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. PER CENT.
Sirunagalur small tank	42	166	173	220	93	...	410	58·1
Do. large tank	71	247	224	232	Nil.	65	390	40·6
Perambakkam large and Chittary tanks...	323 15	1,242	1,362	1,638	330	310	2,435 192	47·9
Sinna Vemmani large tank ...	69	288	278	293	124	67	548	53·1
Do. small tank ...	20	121	207	251	103	...	300	38·9
Total ...	540	2,064	2,244	2,634	650	442	4,275	47·8

II.—Hydraulic Details.

Name of Work.	Catchment Basin Area.	Maximum Supply. Catchment per second.	Maximum Supply. Channels per second.	Length of Escape. Total.	Length of Escape. Effective.	Average Height of Bund. Above F.T.L.	Average Height of Bund. Above M.T.L.	Surplus discharged at M.T.L. per second.	Tanks above.
	Sq. M.	C Ft.	C. Ft.	Ft.	Ft.	Ft.	Ft.	C. Ft.	No.
Sirunagalur small tank ..	0·5	354	..	E 24	24	2·5	1·0	122·1	Not stated.
Do. large tank ..	1·0	562·5	..	E 115 C 24	115 20	4·0 2·5	2·5 1·0	354·8 116·9	
Perambakkam large tank ..	3·0	1,170	..	W 24 E 135 C 51	159 41·5	4·0 3·0	2·5 1·0	564·7 373·6	
Sinna Vemmani large tank.	1·0	562·5	..	W 51 E 108 C 24	159 20	4·5 2·5	2·5 1·0	1169·9 116·9	1
Do. small tank..	0·5	354	..	W 24 E 134 Fil. E 114	158 Nil. 114	4·0 2·0 4·0	2·5 0·5 2·5	561·6 0·0 351·8	

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. Calingulah 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:—

Sirunagalur Small Tank.—This tank is situated in the catchment basin of the Mambakkam tank, latitude 12° 26′ 0″, longitude 79° 54′ 0″. The latter tank commands the railway line at the 50th mile, but the surplus entering the Pakkam tank first crosses the line at the 54th mile.

The estimate provides for raising and repairing the bund, protecting the inner slope with kuskus up to M.W.L. and with turf above that level, forming an escape of 115 feet in length planted with grass and for repairing an Irrigation sluice.

The estimate is recommended for sanction, reduced however to Rupees 410 by the omission of the provision for turfing and for planting kuskus grass above F.T.L.

Sirunagalur Large Tank.—This tank is situated in the catchment ground of the Mambakkam tank, latitude 12° 26′ 0″, longitude 79° 54′ 0″ in close proximity to the railway line at the 55th mile, and its surplus falls into the side ditch and enters the Pakkam tank through culverts at the 54th mile.

The estimate provides for raising and repairing the bund, protecting the inner slope with kuskus up to M.W.L., and above that with turf, repairing the sluice, converting the calingulah into a weir by removing the dam stones and raising the body wall to F.T.L., and for forming a grass planted escape of 135 feet long.

The estimate for repair of the bund, in which is included the removal of portion of it to form an escape, is recommended for sanction less the amount for turfing and for that portion of the kuskus planting above F.T.L., which will reduce the total from Rupees 455 to Rupees 390.

For the extensive repairs and additions to the sluice it is said in the report that a plan is attached, but no such plan has been received, and it is recommended that sanction for the work be deferred.

The estimate for repairing the surplus weir, Rupees 65, is recommended for sanction.

Perambakkam Large and Chittary Tanks.—These tanks lie alongside each other, and they are situated in latitude 12° 31′ 0″, longitude 79° 51′ 0″. The large tank was injured by the floods of 1872, and a considerable portion of the bund was carried away. The tank was repaired at a cost of Rupees 330. In 1874 during another flood the bund was again damaged, and the Chittary (small tank) breached, the breaching of the latter tank placed the village in danger, as its bank protects the village from surplus waters of the large tank, the restoration of the Chittary or small tank was consequently carried out at once as a work of emergency at a cost of Rupees 100, which is included in the estimate now submitted for sanction.

The Chittary or small tank is a very unimportant tank as a work of irrigation, and it is proposed to abandon it as such only retaining the bund as a protection to the village. The 14·5 acres of land which it irrigates will be irrigated by the large tank, whose capacity is equal to the proposed increase to its ayacut.

The estimates provide for raising and repairing the bund of the large tank, protecting the inner slope with a belt of kuskus up to M.W.L. and turfing above that level, repairing two Irrigation sluices, converting a calingulah into a weir and constructing a dry stone escape; also for repairing the bund of the Chittary or small tank, and for forming an additional escape.

The estimate for repair of the bank of the *Perambakkam large tank* is recommended for sanction reduced to Rupees 1,660 by cutting out the provision for turfing and for the portion of kuskus planting between F.T.L. and M.W.L. It is noticed that watering and ramming are provided for the whole earthwork to the top of the bank.

The estimates for repairs and additions to the two sluices Rupees 652 each are recommended for sanction. The longitudinal section of the bank shows three sluices, but in the report accompanying the estimates it is stated that there are only two.

The estimate, Rupees 123, for alterations and repairs to the existing calingulah is recommended for sanction. The estimate for the new rough stone escape is recommended for sanction, reduced from Rupees 375 to Rupees 310 by the reduction of the length from 108 to 88 feet which will be enough. The plan shows F.T.L. as a foot above the level of this escape, which is supposed to be an error in drawing.

Of the estimate* for repair of *Chittary tank* embankment Rupees 100 were, it appears, spent in 1874. Emergent repairs should be specially sanctioned while the emergency exists by the Superintending Engineer. See Irrigation Memorandum No. $\frac{9}{C}$.† The estimate is recommended for sanction.

* Rupees 192.

† 27th June 1876.

Sinna Vemmani Large Tank.—This tank is situated in the catchment basin of the Sengatoor tank, latitude 12° 26′ 0″, longitude 80° 1′ 0″. It was breached by the floods of 1872 and was repaired, and subsequently (1874) was nearly breaching again. The bund is much eroded. The tank has one Irrigation sluice which is in need of repair, and a calingulah which is insufficient for the discharge of the surplus.

The estimates provide for raising and repairing the bund, securing the front slope up to M.W.L. with a belt of kuskus planting and turfing above M.W.L., repairing the Irrigation sluice, converting the calingulah into a weir, and for forming a grass planted escape.

The estimates are recommended for sanction, reduced to Rupees 615 by cutting out the provision for turfing and for the kuskus planting above F.T.L.

Sinna Vemmani Small Tank.—This tank also is situated in the catchment basin of the Sengatoor tank, latitude 12° 25′ 0″, longitude 80° 2′ 0″; its surplus flows into the Vemmani large tank. It was breached and repaired in 1872, and was again breached in 1874. The ryots have thrown up a ring bund at the breach. The bund is much eroded and the Irrigation sluice is in need of repairs. The tank has no surplus work.

The estimate provides for raising and repairing the bund, protecting the inner slope up to M.W.L. with kuskus planting and turfing above, repairing the Irrigation sluice and forming a grass planted escape.

It is recommended for sanction, reduced to Rupees 300 by cutting out the provision for turfing and for kuskus planting above F. T. L.

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, &c.
		Original Works	Repairs.	
		Rs.	Rs.	Rs.
Sirunagalur small tank.	Raising and repairing the bund, also repairing the Irrigation sluice and forming an escape planted with kuskus ...	...	410	410
Sirunagalur large tank.	Raising and repairing the bund and forming an escape planted with kuskus ...	...	390	455
	Converting the calingulah into a weir ...	65	...	
Perambakkam large and Chittary tank.	Raising and repairing the bund, repairing two Irrigation sluices and converting the calingulah into weir	...	2,435	2,937
	Constructing a dry stone escape	310	...	
	Repairing bund of Chittary and forming a planted escape	...	192	
Sinna Vemmani large tank.	Raising and repairing the bund, repairing the Irrigation sluice and forming a planted escape	...	548	615
	Converting calingulah into weir ...	67	...	
Sinna Vemmani small tank.	Raising and repairing the bund, repairing the Irrigation sluice and forming a planted escape	...	300	300

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

10th April 1877.

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

Proceedings of the Madras Government, Public Works Department, 23rd April 1877. No. 1,386.

No. 539. ORDER THEREON, 23rd April 1877, No. 1,386.

IRRIGATION, No. 53.

Account.

No. 180 W, dated 10th April 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.
			Rs.	
Sirunagalur small tank.	Repairing bund and sluice and forming an escape	Repairs	410	30 I
Sirunagalur large tank.	Repairing bund and forming an escape	Do.	390	1 } 31 I
	Converting calingulah into weir	Original Works.	65	2 }
Perambakkam, large & Chittary tanks.	Repairing bund and two sluices and converting calingulah into weir	Repairs	2,435	1 } 32 I
	Escape	Original Works.	310	2 }
	Repairing bund of Chittary and forming escape	Repairs	192	3 }
Sinna Vemmani large tank.	Repairing bund and sluice and forming an escape	Do.	548	1 } 33 I
	Converting calingulah into weir	Original Works.	67	2 }
Sinna Vemmani small tank.	Repairing bund and sluice and forming an escape	Repairs	300	34 I

2. These sanctions are registered as shown above.

(True Extract.)

Lt.-Col., 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

E. I. Form No. 1.

OFFICE OF CHIEF ENGINEER FOR IRRIGATION,
Fort Saint George, 10th April 1877.

No. 180.W.

Note by the Chief Engineer for Irrigation.

No. 3982
Dated 16th Feb. 1877.
Encls. 24.

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.	Amount. Rs.
Madrantiecum	Sirunagalur	Tank No. 196. V. Small Tank	520
do	do	do V. large Tank	645
do	Perambakkam	Tank No. 82. V. Large & Chittary Tanks	3220
do	Sirna Vennianu	Tank No. 360. V. large tank	685
do	do	do V. Small Tank	355
		Total Rupees	5425

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 6 years.	Highest Revenue for 5 years.	Outlay. During the previous 4 years.	Outlay. Proposed—ordinary Agreement. Original Work.	Outlay. Proposed—ordinary Agreement. Repairs.	Average annual proportion of Charges to Revenue.
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	per cent Rs.
Sirunagalur Small Tank	42	166	173	220	93	-	410	58·1
do Large Tank	71	267	224	232	Nil	65	390	40·6
Perambakkam Large and Chittary Tanks	323 15	1242	1362	1638	330	310	2635 192	47·9
Sirna Vennianu Large Tank	69	288	278	293	124	67	548	53·1
do Small Tank	20	121	207	251	103	4	300	38·9
Total	540	2064	2244	2634	650	442	4276	47·8

II.—*Hydraulic Details.*

Name of Work.	Catchment Basin Area.	Maximum Supply. Catchment per Second.	Maximum Supply. Channels per Second.	Length of Escape. Total.	Length of Escape. Effective.	Average Height of Bund. Above F. T. L.	Average Height of Bund. Above M. T. L.	Surplus discharged at M. T. L. per Sec.	Tanks above.
	Sq. M	C. ft.	C. ft.	Ft.	Ft.	Ft.	Ft.	C. ft.	No.
Sirunagalur Small Tank	0.5	3574	"	E. 24	24	2.5	1.0	122.1	not stated
— do — large tank	1.0	5625	"	K. 24	20	2.5	1.0	116.9	"
Perambakam large tank	3.0	1170	"	K. 57	41.5	3.0	1.0	378.6	"
Sirna Vennmani large tank	1.0	5625	"	K. 24	20	2.5	1.0	116.9	1
do Small Tank	0.5	3574	"	Nil	Nil	2.0	0.5	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 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—:

Sirunagalur Small Tank.

This tank is situated in the catchment basin of the Mambakkam Tank Lat. 12°-26-0 Long. 79°-56-0. The latter tank Commands the railway line at the 50th mile but the surplus entering the Pakkam tank first crosses the line at the 54 Mile.

The estimate provides for raising and preparing the bund, protecting the inner slope with kuskus up to M.W.L. and above that with turf, repairing the sluice, converting the kalingulah into a weir by removing the dam stones and raising the body wall to F.T.L. and for forming a grass planted Escape of 135 feet long.

The Estimate for repairs of the bund

Note for Leader— Red entries in this not to be permitted in Clarendon type and not to be in space 2 allowed for Print.

aided with turf above that level, forming an Escape of 115 feet in length planted with Grass and for repairing an irrigation sluice.

The estimate as recommended for sanction reduced however to Rs 410 by the omission of the provision for turfing and for planting kuskus grass above F.T.L.

Sirunagalur large Tank.

This tank is situated on the catchment ground of the Mambakkam tank Lat. 12.26.0" Long. 79-54-0 in close proximity to the railway line at the 55 mile and its surplus falls into the side ditch and enters the Pakkam tank through culverts at the 54 mile.

The estimate provides for raising and repairing the bund, protecting the inner slope with kuskus up to M.W.L. & above that with turf, repairing the sluice, converting the kalingulah into a weir by removing the dam stones and raising the body wall to F.T.L. & for forming a grass planted Escape of 135 feet long.

The Estimate for repairs of the bund

bund in which is included the removal of portion of it's formation Escape is recommended for sanction less the amount for turfing and for that portion of the Kuskus planting above F.T.L. which will reduce the total from Rs 456 to Rs 390.

For the extensive repairs and additions to the sluice it is said in the report that a plan is attached but no such plan has been received, and is recommended that sanction for the work be deferred.

The estimate for repairing the surplus weir Rs 65 is recommended for sanction.

Perambakkam Large & Chittary tanks

These tanks lie along side each other & they are situated in Lat. 12°-31'-0" Long. 79°-51'-0" The large tank was injured by the floods of 1872 and a considerable portion of the bund was carried away. The tank was repaired at a cost of Rs 330. In 1874 during another flood the bund was again damaged & the Chittary (small tank) breached, the breaching of the latter tank placed the village in danger as it to tank protects the village from surplus waters of the large tank, the restoration of the Chittary or small tank was consequently carried out at once as a work of emergency at a cost of Rs 70 which is included in the estimate now submitted for sanction.

The Chittary or small tank is a very important tank as a source of irrigation and it is proposed to abandon it as such only retaining the bund as a protection to the village. The 14.5 acres of land which it irrigates will be irrigated by the large tank whose capacity is equal to the proposed increase to its present.

The Estimates provides for raising and repairing the bund of the large tank, protecting the inner slope with a belt of kuskus up to H.W.L. & turfing above that level, repairing two irrigation sluices, converting a

Kaliyuga

Kaliyugalah into a weir & constructing a dry stone Escape also for repairing the bund of the Chittary or Small tank and for forming an additional Escape.

The Estimate for repair of the Anaikat of the Periandiakkani Large tank is recommended for sanction reduced to Rs 1660 by cutting out the paradeiceiv for turfing, and for the portion of hedging planting between E.T.L. & W.W.L. It is provided that watering and trimming are provided for the whole earthwork & to the top of the bank.

The Estimates for repairs and additions to the two sluices Rs 652 each are recommended for sanction the Longitudinal section of the bank shows 3 sluices but in the report accompanying the estimates, it is stated that there are only two.

The Estimate Rs 123 for alterations and repairs to the existing Kaliyugalah is recommended for sanction. The Estimate for the new pitch stone Escape is recommended for sanction reduced from Rs 375 to Rs 318 by the reduction of the length from 108 to 88 feet which will be enough. The plan shows E.T.L as 4 feet above the level of the Escape which is supposed to be an error in drawing.

Rs 192 Of the Estimate for repairs of Chittary tank Embankment Rs 100 were, it appears, spent in 1876. Emergent repairs should be specially sanctioned while the emergency exists by the 27 June 1876. Superintending Engineer. See Irrig. Memo No 2.

The Estimate is recommended for sanction.

Senna Vennanne Large Tank

This tank is situated in the Katchimal basin of the Lengatton tank Lat. N. 26° Long. 80-1-0. It was breached by the floods of 1872 and was repaired and subsequently (1876) was nearly breaching again the bund is much eroded. The tank has one irrigation sluice which is in need of repair and a Kaliyugalah which is insufficient for the discharge of the surplus.

The Estimates provide for raising

and

and preparing the bund, securing the front slope up to N.W.L with a belt of kuskus planting & turfing above N.W.L, repairing the irrigation sluice, converting the kalingulah into a weir and forming a grass planted Escape.

The estimates are recommended for sanction reduced to Rs 615 by cutting out the provision for turfing and for the kuskus planting above F.T.L.

Sirunagalur Small Tank

This tank also is situated in the catchment basin of the Sengatoo tank Lat. 12°-25'-0 Long. 80-2-6, its surplus flows into the Vennanu large tank. It was breached and repaired in 1872 and was again breached in 1874. The Ryots have thrown up a ring bund at the breach. The bund is much eroded and the irrigation sluices is in need of repairs. The tank has no surplus work.

The estimate provides for raising and repairing the bund, protecting the inner slope up to N.W.L with kuskus planting and turfing above, repairing the irrigation sluice and forming a grass planted escape.

It is recommended for sanction reduced to Rs 300 by cutting out the provision for turfing and for kuskus planting above F.T.L.

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	Annual Estimate for ordinary & extraordinary repairs & irrigation works		Total for Tank
Sirunagalur Small tank	Raising & repairing the bund also repairing the irrigation sluice & forming an Escape planted with kuskus	4	410	410
Sirunagalur Large Tank	Raising & repairing the bund & forming an Escape planted with kuskus		390	455
	Converting the Kalingulah into a weir	65		

	Raising & repairing the bund, repairing two irriga- tion sluices and converting the Kalingulah into a weir	"	2435	
Peramballe large & Chittary tank	Constructing a dry stone escape	310		293
	Repairing bund of Chittary & forming a planted escape		192	
Sinna Vemmani large tank	Raising & repairing the bund, repairing the irrigation sluice & forming a planted escape		548	815
	Converting Kalingulah into weir	67	"	
Sinna Vemmani Chiatt tank	Raising & repairing the bund, repairing the irrigation sluice and forming a planted escape	"	300	300

C. Goldsworthy

Actg. Chief Engineer for Irrigation

& Chief Engineer for Roads

The Secretary to Govt

P.W.D.

Depositg

1877.

From
The Chief Engineer for Irrigation
I.W.D.
14APR77
No. 3913

Dated 15th April 1877.
Deptl. —do—

Entered

No. 180-W

Tank Repairs — Chingleput District. — Note recommending for sanction, estimates for Rs 5425 for certain ——.

Rg. O 23rd April/77 Bk. 538

No. 1386 dy 23rd April 1877

E. I. Form No. 3.

No. 180. W
dated 10th April 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 Memo. marginally noted are sanctioned:—

Name of Work.	Item of Estimate.	Fund. ordinary Agricultural Irrigation	Amount	Irrigation Registry No.
Seruvagalur small tank	Repairing bund & sluice & forming an Escape --	Repairs	410	30 I
Seruvagalur large tank	Repairing bund & forming an Escape --	Repairs	390	1
	Converting Kalingulah into weir --	orig. Works	65	2 } 31 I
Perambakkam large & Chittary Tanks.	Repairing bund and 2 sluices & converting Kalingulah into weir	Repairs	2435	1
	Escape -- --	orig. works	310	2 } 32 I
	Repairing bund of Chittary and forming Escape	Repairs	192	3
Sirunavallur large tank	Repairing bund and sluice and forming an Escape -- --	Repairs	548	1 } 33 I
	Converting Kalingulah into weir -- --	orig. Works	67	2
	Repairing			

Lima Tunnan's Small Tank	Repairing bund and sluice and forming an Escape - - - -	Repairs	300	34 I	

2. These sanctions are registered as shown above -

Ex. ... 44.14.54

S.E. Chenghe Sub. Collector

Ch. Engr. with Govt. b/w

Ind. W.A.

Revenue Dept. Dated 12.5.77

44.11.4.77

8913

Govt. of {1877} Madras.

PUBLIC WORKS.

To The S.E. Chief Engineer

Dated

Issued

Recd. Encl.

G. O., 25th April 1877, No. 1386

Nos. 538-539

Tanks. Completion &c

The estimates for repairs
&c be certain — cancld

Chief Engr. Dorsd. 12.5.77

G.O.

Gr 11.4.77