6432

Govt. of [1875] Madras

PUBLIC WORKS.

To Dist: Eng: Presidency

24/11

Rect. 3/16 - 3/19

Quarters of the Ordnance Office Fort St. George. Pr: Facility &c. &c. regarding the construction of a third story to the ——— Communicated to the Dist Engr. Presidency with remarks and an erasion of plan & Estimate of 1857 ———

3001

Proceedings of the Madras Government, Public Works Department, 27th October 1875.

Read the following :—

No. 1,184.

No. 270. *Note by the Chief Engineer for Irrigation.*

No. 2,626, 27th September 1875.

THE following estimates have been submitted by the Superintending Engineer, Chingleput :—

Neelamungalum Tank. Repairs ...	...	Rupees 2,130
Surplus weir	...	„ 500
Sluice	...	„ 240
		740
Ayacut area ...	...	Acres 450
„ assessment	...	Rupees 1,704
Average revenue	...	„ 1,111
Highest „	...	„ 1,230

Rupees 150 were expended on the tank in 1873-74.

The basin is 7 square miles, and the tank is the terminal of a group of four tanks. Of the four tanks above, estimates for the requirements of two* have been submitted and reviewed. It would be very much better were estimates sent up for sanction for all the tanks of a group at one time, with a sketch map showing their order and connection. This might easily have been done in the present case. The Neelamungalum Tank having a calingulah with an effective length of only 29 feet was breached in 1872, and again last year, a result which was inevitable. It is now intended to remove the upright stones of the existing calingulah, thereby increasing its length to 36 feet, and to construct a new surplus weir 119 feet long, and M.W.L. will then be about 2½ feet above F.T.L. The ayacut may with advantage be reduced to 325 acres, there being no chance of the remaining 125 acres being regularly irrigated.

* Pinnamy and Oolathamungalum.

2. Poolambakum Tank. Repairs	...	Rupees 1,240
Dry stone escape	...	„ 150
Ayacut area	...	Acres 183
„ assessment	...	Rupees 626
Average revenue	...	„ 414
Highest „	...	„ 442

Rupees 55 were expended on the tank in 1873-74.

The area of the basin is 2½ square miles, and it may be safely assumed that the highest revenue indicates the greatest acreage that can be regularly irrigated, *viz.*, about 130 acres, so that 50 acres may with advantage be taken out of the ayacut. The tank was damaged in 1872, and much damaged and breached in 1874. It has a calingulah 34 feet long, of which 29 feet are effective; the dam stones are to be removed, and 81 feet of dry stone escape given in addition. With this addition and the interior slope repaired and planted with tank grass the tank may be expected to be safe.

* Including re-constructing a sluice.	3. Ariyaperambakum Tank.	Repairs	...	...	Rupees	*1,645
	Surplus weir	...	...	...	„	680
	Ayacut area ...	...	...	...	Acres	439
	„ assessment	...	...	...	Rupees	1,376
	Average revenue	...	...	...	„	712
	Highest „	...	...	...	„	833

No past expenditure has been noted.

The area of the catchment basin is reported to be 4 square miles, and this coupled with the average and highest revenue shows clearly that the ayacut needs reduction to the extent of about 170 acres.

The tank has one escape 36 feet long and surplus has been discharged also at two cuts. The proper length of surplus weir being 149 feet, it is not surprising that breaches occurred in 1872 and 1874. A surplus weir 113 feet long is to be constructed, and its wings should be carried up to the full height of 5 feet above F. T. L. to correspond with the section of the bund. The re-construction of the sluice is chargeable to Revenue, and, as regards the design, it will be cheaper to lengthen the tunnel 6 feet at the tank end, and to place the face wall where F. T. L. cuts the front slope, thus reducing its height and that of the wing walls some 5 feet. There are objections to sluice tunnels being made with a diameter of only 1 foot, but a trial may be given to this design, which provides for a concrete tunnel with a view to economy. Generally 2 × 2½ feet should be the minimum size of tunnels where the length of these exceeds a few feet.

4.	Poupadercoothum Tank.	Repairs	...	...	... Rupees	590
	Ayacut area ...	...	...	...	... Acres	192
	„ assessment	...	...	...	... Rupees	683
	Average revenue	...	...	...	... „	491
	Highest „	...	...	...	... „	591

No expenditure has been recently incurred. The catchment basin is said to be 1¼ square miles, but it appears to be improbable that about 137 acres or 110 acres per square mile can be regularly irrigated. It would be more reasonable were the catchment basin 2½ square miles. The tank breached in 1874. It has a calingulah 36¼ feet long of which 31¼ feet are effective; the dam stones are to be removed and the crest raised to F. T. L. The inadequacy of this surplus work, though the bund appears to have been very nearly 3 feet above F. T. L. and 4¼ feet above the calingulah crest, confirms the opinion that the area of the catchment basin has been under-estimated. It is proposed to render the tank safe by cutting down one end of the bund for a length of 32½ feet to F. T. L. and planting cuscus grass. The maximum flood discharge is calculated to be 652·72 cubic feet, but it will be better to assume 1,030 cubic feet, or that due to 2½ square miles. Then the masonry escape will get rid of 342 cubic feet, and if the rest of the discharge be passed over levelled ground it will be better to make the latter 6 inches above F. T. L., and without grass the proper length would be 110 feet, which with grass planting should be doubled or made 220 feet. As, however, 72 feet of dry stone escape at F. T. L. would suffice, if stone is to be had, and as the tank is partly revetted this seems probable, it will be better

to provide this more convenient sort of surplus work the cost of which will probably be Rupees 200, and on this supposition that amount may be allowed.

OOTACAMUND,
6th October 1875.

(Signed) JOHN MULLINS, Lt.-Col., R.E.,
Chief Engineer for Irrigation.

No. 371. ORDER THEREON, 27th October 1875, No. 3,001.

IRRIGATION, No. 35.

Account.

THE following estimates are sanctioned:—

Chingleput District

	Capital. Rs.	Revenue. Rs.
Neelamungalum Tank	740	2,130
Poolambakum „	150	1,240
Ariyaperambakum „	680	1,645
Poupadercoothum „	200	590
Total ...	1,770	5,605

(True Extract.)

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

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

Exd. E. C. Shunker.

Spare Copies

No 1184

Note by the Chief Engineer for Irrigation.

Enclosure 9. The following estimates have been submitted by the Supt Engineer, —

No 2626. 27. Sept 1875 Chingleput.

Nedamangalam Tank. Repairs Rs 2130
Surplus weir 500
Sluices. 240 740

Ayacut area - acres 450
" Assessment Rs 1704
Average Revenue " 1111
Highest do " 1230

Rupees 150 were expended on the tank in 1873-74.

The area of the catchment basin is 9 square miles, and the tank is the terminal of a small group of 5 tanks. Of the 4 tanks above estimates for the requirements of two have been submitted and reviewed. It would be very much better were estimates sent up for execution for all the tanks of a group at one time, with a sketch map showing their order and connection. This might

† Pinnamy & Colathamanga-lum.

...nity have been done in the present ...ason. The Reclamation Bank having a caliyngdah with an effective length of only 29 feet was breached in 1892 and again in last year as a result which was inevitable. It is now intended to remove the upright stones of the existing caliyngdah, thereby increasing its length to 36 feet, and to construct a new surplus weir 119 feet long, and M.W.L with the crest about 2½ feet above F.T.L. The ayacut may with advantage be reduced to 335 acres, these being no chances of the remaining 125 acres being regularly irrigated.

2- Poolambakkam Rums Tank Repairs Rs 1,260
Dry stone escape " 180

Ayacut area acres 133
" Assessment Rs 636
Average revenue " 414
Highest do " 443

Repairs 55 acres cultivated on the tank in 1892-94.

The area of the basin is 0·5 square miles and it may be safely assumed that the highest revenue indicates the greatest average that can be regularly irrigated.

3- Kringaperambakkam Tank Repairs Rs 615
Surplus weir " 680

Ayacut area acres 439
" Assessment Rs 1376
Average revenue do 912
Highest do do 833

No past expenditure has been noted.

The areas of the catchment basin is reported to be 4 square miles, and this compared with the average and highest revenue shows clearly that the ayacut needs reduction to the extent of about 170 acres.

The tank has one escape 36 feet long

× including reconstructing a sluice.

and surplus has been discharged also at two cuts. The superior length of surplus weir being 1647 feet it is not surprising that breaches occurred in 1873 and 1874. A surplus weir 115 feet long is to be constructed, and its wings should be carried up to the full height of 5 feet above F.T.L. to correspond with the section of the bund. The reconstruction of the sluice is chargeable to Revenue, and as regards the design it will be cheaper to lengthen the tunnel 6 feet at the tank end, and to place the face wall where F.T.L cuts the front slope thus reducing its height and that of the wing walls some 5 feet. Stone arch objections to sluice tunnels being made with a diameter of only 1 foot, but a trial may be given to this design, which provides for a concrete tunnel, with a view to economy. Generally 3 × 2½ feet should be the minimum size of tunnels where the length of these exceeds a few feet.

Pandaravaru tank

4- Tanjavur Collectorate Tanks Report (1875-76) 9

Ayacut area	acres	193
" assessment	Rs	683
Average revenue	"	491
Highest do	"	591

No expenditure has been recently incurred. The catchment basin is said to be 1¼ square miles but it appears to be in. - probable that about 137 acres or 110 acres per square mile can be regularly irrigated. It would be more reasonable were the catchment basin 2½ square miles. The tank breached in 1874. It has a Calingulah 36¼ feet long of which 31¼ feet are effective. The dam stones are to be removed and the crest raised to F.T.L. The inadequacy of this surplus work, though the bund appears to have been very nearly 3 feet above F.T.L and 4¼ feet above the Calingulah crest confirms the opinion that the area of the catchment basin has been under-estimated. It is proposed to render the tank safe by cutting down one end of the bund for a length of

32½ feet to F.T.L. and planting two rows grass. The maximum flood discharge is calculated blue 652.72 C.F. but it will be better to assume 1030 C.F. or that due to 2½ square miles. Shew the waterway escape will get rid of 378.2 C.F. and if the rest of the discharge has passed over levelled ground it will be better to make the latter 6 inches above F.T.L and without grass the proper length would be 110 feet, which with grass planting should be doubled or made 220 feet. Cut-off wall ½ feet of dry stone escape at F.T.L would suffice, if stone is blue lias, and as the bank is partly rivetted this seems probable, it will be better to provide this more convenient cost of protective work the cost of which will probably be Rupees 300 and on this supposition that amount may be allowed.

I am Sir
Your Obt Servt
Chief Engineer for Irrigation
Calcutta
6th October 1876.

To The Secy to Govt
P.W.D.

From
The Secretary to the Government
of Madras
To
The Chief Engineer for Irrigation

(G.O. No 1184 dt 16 Oct 1876)

Sir

I am directed to acknowledge the receipt of your letter No 13 dated 27th ultimo and to forward the following remarks for your information.

The following works are sanctioned.

Cuddapah District

Capital Account

Pamidi Reservoir Rs. 2130
Do Canal " 150 - 1,240
Gram Do " 680 - 1,820
Gram Do " 200 - 570

Rs. 3,960

Ex 11/10

5 with original papers
5
15
5 with 4 cts of Abstract
Office 17

Ex 270
Dis 22-10-76
Dispatched 10-10-76 R 12-10-76

P. W. 1875 Dept.
No: 6649.

From

The Chief Engr.
for Irrigation.

Dated 6 Octr. } 1875.
Rec'd. 18 " }

E.E. No: 1184

Noted Estt. for
repairing certain Tanks
in the Chingleput Dist.

G.I. No 3001 . 29.10.75

32½ feet to F.T.L. and
grass. The maximum
is calculated to be 6½2.
be better to assume 10
to 2½ square miles. The
escape will get rid of
rest of the discharge
levelled ground it will
the latter 6 inches above
grass the proper length
which with grass pla
doubled or made 320
½ feet of dry stones
suffice, if stones is to be
so partly revetted this
it will be better to pro
convenient sort of
cost of which will pr
300 and on this suppos
may be allowed.

Chief Engin
Ootacamund
6th October 1875

To the

No 3001 Public Dept.
Proceedings of the Madras Government
Read the following:-

From the Chief Engineer }
for Irrigation } (Ref. No 1184 dt. 6th Oct. 1875)

The petitioners
-mentioned
Chingleput District

Estimate for Rs
Do. Contingencies do
Do. Establishment do
Do. Supervision do

Rs. 300 - 2/30
" 150 - 1/5/0
" 600 - 1/11/0
" 300 - 570

No 11/10

5th Inst. Chingleput - 50
Chief Engr for Irrign
Coll. of Chingleput
Rev. Dept — 5-
Contra — 1/5-
50 with 4 sets of Abs
Estt

Dept - 5-11-75 Office

Dept. of Sc. & Industries.

PUBLIC WORKS.

To Supdg. Engr. Chingleput

Dated

Recd

Read

Encl.

G. O. 27th Feb 1875. No. 3001

Nos. 370-371

Encl. Chingleput Dt.

Re Estimates amounting to Rs. 7375 for repairing certain tanks sanctioned.

Nos 370-371

Cir: 22-10-75

Recd to Dt: 18-10-75 R 22-10-75