M.R.O. 1—10,006—28-2-50.

(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. / ~~B.P. No.~~	1470	Press / ~~Mis.~~	C875
Dated	26-5-	—195—	

Not to be folded or roughly handled

Read the following.

No. 517.

No. 511. *Note by the Chief Engineer for Irrigation.*

THE following estimates have been submitted for sanction by the District Engineer, North Arcot:—

Valethangypooram Tank, Rupees 1,335.

Ayacut area	Acres 122
„ assessment	Rs. 641
Average revenue...	„ 615

There is no record of repairs previously executed.

The drainage basin of the tank is 2 square miles, and as the supply received from the Palar, through the Mahindravady tank, is under regulation, the discharge to be provided for is 893 cubic feet a second. There is a calingulah 24 feet in length, which is to be supplemented by an escape 120 feet long at one end of the tank where the soil is disentegrated rock. A high level sluice is required, the estimate for which amounts to Rupees 115. Small water wings are required in rear as sketched on the plan.

The sanction may be given for Repairs	Rs. 1,220
Minor New Works	„ 115

2. Chinglenatham Tank, Rupees 920.

Ayacut area	Acres 39
„ assessment..	Rs. 172
Average revenue	„ 87

There is no record of previous repairs. The catchment basin is $1\frac{1}{2}$ square miles, and the existing escapes, 80 feet long, are sufficient. The District Engineer explains that the repair of this tank is of importance as affecting the Peroncoonjee tank, and that although the amount to be spent, nearly 11 years' revenue, is very large, if the difference between the average revenue and the ayacut be secured it will be worthwhile to carry out the repairs. Apparently there is reason for hoping that the full ayacut assessment will in fairly good seasons be obtained. The soil being gravel at a rate of 2 Annas a cubic yard, turfing may be omitted, and the item of Rupees 205 on this account struck out. The estimate will then amount to Rupees 715.

3. Cadambanthangle, Rupees 460.

Ayacut area	Acres 87
„ assessment..	Rs. 350
Average revenue	„ 227

The catchment basin is said to be half a square mile, and no other source of supply is mentioned. The area irrigated is on the average about 56 acres, and this is remarkably large for the basin. It has no escape, and a pavement 54 feet long is to be provided, which work may be included in the repairs.

4. Poondy Samudrum Tank, Rupees 420.

Ayacut area	Acres 9
„ assessment...	Rs. 66
Average revenue	„ 55

No repairs have, as far as is known, been executed for many years.

The estimate is nearly eight times the average revenue, and one-half of it appears

to be for the protection of the road which runs over the bund. This is not an agricultural work, and the work included in this estimate should be confined to the reconstruction of the old revetment, and raising a few somewhat low places. The amount will be Rupees 214.

5. Vullapooram Tank, Rupees 3,500.

Ayacut area	Acres	365
„ assessment..	Rs.	1,884
Average revenue	„	1,525

No repairs have been executed in the past four years, and apparently it is many years since anything was done to it. The catchment basin is 6 square miles, and except an old ruined pavement, 27 feet in length, there are no means of disposing of surplus. A masonry weir 200 feet long is to be provided at a cost of Rupees 540. No cross section of this work has been given, and from the longitudinal section of the bund it appears that there will be a considerable overfall, the ground being low at one end of the site. The design of this work must be recast unless it be moved further towards the end of the bund; the apron (masonry) should be placed at the ground level, and there should be an outer apron of rough stone not less than 9 feet wide and 2 feet thick, with its surface about 18 inches below that of the masonry apron. The foundations must not be less than 4 feet below the surface of the masonry apron. The work will cost probably 800 Rupees.

The work to be done will be—

	Rs.
Repairs including reconstruction of sluices	1,950
Minor New Works, a surplus weir... 800	
New stone revetment 1,100	
	1,900
Total ...	3,850

6. Panapakum Tank, Rupees 1,220.

Ayacut area..	Acres	189
„ assessment...	Rs.	1,010
Average revenue	„	928

The tank drains an area of about half a square mile, but its principal supply is derived from two spring channels. It has no surplus weir, and one 44 feet long is to be provided. Of this work no cross section has been given, and the ground level is not shown on the section. A rough stone apron 9 feet wide and 2 feet thick will be required, and will cost about 54 Rupees, and the estimate will be Rupees 360. The high level sluice required for the irrigation of 20 acres now supplied by a cut in the bund should have water wings in rear, for which with a retaining wall about 15 Rupees will be needed. The work to be done will then be—

	Rs.
Repairs	820
Minor New Works, a surplus weir 360	
High level sluice 115	
	475
Total ...	1,295

7. Thapoor large tank, Rupees 3,840.

Ayacut area	Acres	165
„ assessment	Rs.	647
Average revenue	„	519

No repairs have been done for the last 40 years.

The catchment basin is about one square mile, and a supply is obtained also from the Peroncoonjee surplus channel. The tank has a calingulah 18 feet long, and a pavement partly destroyed, which was about 120 feet long. It is intended to substitute a masonry escape 70 feet long for the latter, and the total of 88 feet thus made available will be sufficient. Here again no cross section of the surplus weir and no indication of ground level have been given. The work will require a rough stone apron, costing Rupees 60, and raising its estimate to Rupees 330, and possibly other modifications will be needed. The estimate is divisible into :—

	Rs.
Repairs...	2,130
Minor New Works revetment 1,420	
Surplus weir 330	
	1,750
Total ...	3,880

The sluice being a reconstruction will be chargeable to repairs.

8. Jumboocolum Tank, Rupees 1,710.

Ayacut area	Acres	67
„ assessment	Rs.	438
Average revenue	„	366

No repairs have been recently executed.

The catchment basin of the tank is about one square mile of ground with a steep fall, and consequently a long weir, 80 feet, for this area is considered by the District Engineer to be necessary, and may be allowed, as the breaching of this tank would affect others below. The design for the weir will do if the apron surface be placed sufficiently low to ensure the outer edge not being undermined. It will be well always to give the levels of the ground on the line of the out-fall from surplus weirs for a distance of 50 to 100 yards; without this information it is impracticable to say whether the arrangements are appropriate.

The item for turfing, say, Rupees 350, may be omitted; it is only under favorable circumstances that general turfing to a bund becomes well-established, and repays the outlay.

The amounts will then be—

	Rs.
Repairs	810
Minor New Works	550
Total ...	1,360

9. Moneyampett Tank, Rupees 870.

Ayacut	Acres	67
„ assessment...	Rs.	350
Average revenue	„	310

No repairs have been recently carried out. The tank has a catchment basin of $\frac{5}{8}$ths of a square mile, and a surplus weir 45 feet long (after upright stones have been removed).

The estimate is for ordinary repairs, but the item, Rupees 245, for turfing may be omitted, and the amount will then be Rupees 625.

10. Thagaracoopum Tank, Rupees 800.

Ayacut area	... ...	Acres 45
„ assessment	... ...	Rs. 169
Average revenue	... ...	„ 311

No repairs have recently been effected.

The catchment basin is half a square mile, which is very small for the 85 or 90 acres apparently irrigated. There is a supply-channel, and if this be a catchwater drain probably the real area draining into the tank will be 1½ square miles at least. The tank has two surplus weirs with an aggregate length of 35 feet, and the District Engineer considers them sufficient, which they are for the half square mile but not for an area which would supply 85 or 90 acres. The larger part of the estimate is for reconstructing stone revetment, and the soil being gravel possibly no special backing will be needed, but the stability of the revetment must be ensured. The item for turfing, say Rupees 150, may be omitted.

11. Casavancoopum Tank, Rupees 670.

Ayacut area	... ...	Acres 29
„ assessment	... ...	Rs. 169
Average revenue	... ...	„ 153

No expenditure on repairs has been recently incurred.

The drainage basin of this tank also is entered at half a square mile, and the cultivation, though still rather large, is in a nearer proportion thereto than at the Thagaracoopum tank.

A pavement for the disposal of surplus is to be provided at a cost of Rupees 90, and may be treated as a repair. Omitting turfing, say Rupees 110, the amount to be sanctioned will be Rupees 560. The rates for earthworks in most of these estimates are high; taking into account that they probably include the consolidation of the earthwork they would appear to be 15 to 20 per cent. higher than they should be. Moreover, though the District Engineer's attention has before been specially called to this subject, one average rate for the work at a long bund is still usually entered.

OOTACAMUND, 13*th May* 1875.

(Signed) JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 512. ORDER THEREON, 26th May 1875, No. 1,470.

IRRIGATION, No. 61.

THE following estimates for tanks in the Wallajah Range of the North Arcot District are sanctioned :—

REPAIRS.

		RS.
1. Valethangypooram	Tank	
2. Chinglenatham	do.	1,220
3. Cadambanthangle	do.	715
4. Poondy Samudram	do.	460
5. Vullapooram	do.	214
6. Panapakum	do.	1,050
7. Thapoor	do.	830
8. Jumboocolum	do.	2,150

REPAIRS.

			RS.
8. Jumboocolum	do.	... ...	810
9. Moneyampett	do.	... ...	625
10. Thagaracoopum	do.	... ...	650
11. Casavancoopum	do.	... ...	560

MINOR NEW WORKS.

1. Valethangypooram	Tank	... ...	115
5. Vullapooram	do.	... ...	1,900
6. Panapakum	do.	... ...	475
7. Thapoor	do.	... ...	1,750
8. Jumboocolum	do.	... ...	550

2. The remarks of the Chief Engineer for Irrigation on some of the estimates will receive the District Engineer's attention, and especially the concluding remarks.

(True Extract.)

(Signed) J. O. HASTED, Major, R.E.,
Offg. Joint Secretary to Government.

To the District Engineer, North Arcot.
„ Controller of Public Works Accounts.
„ Chief Engineer for Irrigation.

Dkd. S. T. Austin,
Spare Copies

No 5-17

Noted by the Chief Engineer for Irrigation.

The following estimates have been submitted for sanction by the District Engineer, North Arcot.

1- Valethangypooram Tank - Rupees 1,335

Ayacut area — acres 132

" Assessment — Rupees 661

Average revenue — " 615

There is no record of repairs previously executed.

The drainage basin of the tank is 2 square miles, and as the supply received from the Palar, through the Irukkambravady tank, is under regulation, the discharge to be provided for is 893 C.F. a second. There is a calingulah 20 feet in length, which is to be supplemented by an escape 120 feet long at one end of the tank where the soil is disintegrated rock. A high level sluice is required, the estimate for which amounts to Rupees 115. Small water wings are required in rear as sketched on the plan.

The sanction may be given for Repairs 1220

Minor New Work Rs. 115

2- Chunglenattam Tank- Rupees 920
Ayacut area acres 39
" Assessment Rupees 172
Average revenue " 87

There is no record of previous repairs. The Catchment basin is 1½ square miles and the existing escapes 80 feet long, are sufficient- The District Engineer explains that the repair of this tank is of importance as affecting the Peroorcoy jee tank, and that although the amount to be spent, nearly 11 years revenue, is very large, if the difference between the average — revenue and the ayacut be secured it will be worth while to carry out the repairs- Apparently there is reason for hoping that the full ayacut assessment will in fairly good seasons be obtained-

The soil being gravel at a rate of 2 annas a cubic yard, turfing may be omitted and the item of Rs 205 on this account struck out- The estimate will then amount to Rupees 715-

3- Cadambanthangle - Rupees 460
Ayacut area acres 84
" Assessment Rs 350
Average revenue " 227

The catchment basin is said to be ½ a square mile, and no other source of supply is mentioned- The area irrigated is on the average about 56 acres, and this is remarkably large for the basin- It has no escape, and a pavement 54 feet long is to be provided, which work may be included in the repairs-

4- Poondy Lainudram Tank- Rupees 420
Ayacut area acres 9
" Assessment Rs 66
Average revenue " 55

The repairs have, as far as is known, been executed for many years-

The estimate is nearly 8 times the average revenue and one half of it appears to be for the protection of the road which runs over the bund- This is not

an

an agricultural work, and the work in-
-cluded in the estimate should be confined
to the reconstruction of the old revetment,
and raising a few somewhat low places.
The amount will be Rupees 2½-

5. Vullapooram Sauk Rupees 3,590
Ayacut area acres 365
" Assessment Rupees 1,884
Average revenue " 1,535

No repairs have been executed in the
last 6 years, and apparently it is many
years since any thing was done to it.

The catchment basin is 6 square miles,
and except an old ruined pavement,
27 feet in length, there are no means
of disposing of surplus. A masonry
weir 200 feet long is to be provided
at a cost of Rupees 500. Its cross
section of this work has been given,
and from the longitudinal section
of the bund it appears that there
will be a considerable overfall, the
ground being low at one end of the site.
The design of this work must be recast
unless

unless it be moved further towards
the end of the bund; the apron (masonry
should be placed at the ground level
and there should be an outer apron of rough
stone not less than 9 feet wide and 2 feet
thick, with its surface about 18 inches
below that of the masonry apron. The
foundations must not be less than
6 feet below the surface of the masonry
apron. The work will cost probably
800 Rupees.

The work to be done will be

Repairs including recon-
-struction of sluices - Rupees 950
Junior New Works.
a. surplus weir - 800
New stone revetment 1100 ... 1900
Total . 3,850

6. Panapatrum Sauk Rs 1220
Ayacut area acres 189
" Assessment Rupees 1010
Average revenue " 928

Re

The tank drains an area of about ½ a square mile, but its principal supply is derived from 2 spring channels. It has no surplus weir and one 40 feet long is to be provided. Of this work no cross section has been given, and the ground level is not shown on the section. A rough stone apron 9 feet wide and 2 feet thick will be required, and will cost about 540 Rupees and the estimate will be Rs 360. The high level sluice required for the irrigation of 20 acres now supplied by a cut in the bund should have water wings in rear, for which with a retaining wall about 15 Rupees will be needed. The work to be done will then be

Repairs.	Rupees 820
Minor new Bunds	
A surplus weir.	360
" high level sluice 115	" 475
Total.	1295

y. Thappoor large tank Rupees 3,840
Ayacut area acres 165
" Assessment. Rupees 647
" Average revenue do 519

No repairs have been done for the last 20 years.

The Catchment basin is about 1 square mile, and a supply is obtained also from the Peroocoonjee surplus channel. The tank has a calingulah 18 feet long, and a pavement partly destroyed, which was about 120 feet long. It is intended to substitute a masonry escape 70 feet long for the latter, and the total of 88 feet thus made available will be sufficient. Here again no cross section of the surplus weir and no indication of ground level have been given. The work will require a rough stone apron, costing Rupees 60, and raising its estimate to Rupees 330, and possibly other modifications will be needed. The estimate

is

is divisible into

Repairs ——————— 2130
Minor new works
Revetment Rs 1420
Surplus weir - 330 1750
Total 3880

The sluice being a reconstruction will be chargable to repairs:-

8- Jumbeocoolum Sank Rupees 1410
Ayacut area acres 64
" Assessment Rupees 438
Average revenue - 366

No repairs have been recently executed.

The catchment basin of the tank is about 1 square mile of ground with a steep fall, and consequently a long weir, 80 feet, for this area is considered by the District Engineer to be necessary, and may be allowed, as the breaching of this tank would affect others below.

The design for the weir will do if the apron surface be placed sufficiently low to ensure the outer edge not being undermined. It will be well always to give the levels of the ground on the line out of the outfall from surplus weirs for a distance of 50 to 100 yards: without this information it is impracticable to say whether the arrangements are appropriate.

The item for turfing, say, Rupees 350 may be omitted: it is only under favorable circumstances that general turfing to a bund becomes well established, and repays the outlay.

The amounts will then be

Rupees 810
Repairs.
Minor New Works Rs " 550
Total 1360

9- Moneyampett Sank Rs 870
Ayacut acres 64
" Assessment Rs 350
Average revenue - 310

No repairs have been recently carried out.

The

The tank has a catchment basin of $\frac{5}{8}$ of a square mile, and a surplus weir 45 feet long (after upright stones have been removed). The estimate is for ordinary repairs, but the item Rupees 245 for turfing may be omitted, and the amount will then be Rupees 625.

10- Thagaracoopum Tank Rupees 800
Ayacut area acres 48
" Assessment Rupees 160
Average revenue " 311

No repairs have recently been effected. The catchment basin is $\frac{1}{2}$ a square mile, which is very small for the 85 or 90 acres apparently irrigated. There is a supply channel, and if there be a catch-water drain probably the real area draining into the tank will be $1\frac{1}{2}$ square miles at least. The tank has 2 surplus weirs with an aggregate length of 35 feet, and the District Engineer considers them sufficient, which they are for the half square mile but

but not for an area which would supply 85 or 90 acres. The larger part of the estimate is for reconstructing stone revetment and the soil being gravel possibly no special banking will be needed, but the stability of the revetment must be ensured. The item for turfing say Rupees 160 may be omitted.

" Kaveripuram tank Rupees 670
Ayacut area acres 29
" Assessment Rupees 169
Average revenue " 153

No expenditure on repairs has been recently incurred.

The drainage basin of this tank also is entered at $\frac{1}{2}$ a square mile, and the cultivation, though still rather large, is in nearer proportion thereto than at the Thagaracoopum tank.

A pavement for the disposal of surplus is also provided at a cost of Rupees 90, and may be treated as a repair. Omitting turfing, say Rupees 110, the amount also sanctioned will be Rs 560.

The

The rates for earthworks in most of these estimates are high - taking into account that they probably include the consolidation of the earthwork they would appear to be 15 to 20 per cent higher than they should be - Moreover, though the District Engineer's attention has before been specially called to this subject, one average rate for the work at a long hand is still usually entered -

Lieut & Coll R.E.
Chief Engineer for Irrigation

Coelacamund
13th May 1875

To The Secretary to Government
P.W. Department.

P. W. 1875 Dept.
No: 3394

From

The Chief Engr.
for Irrigation.

Dated 13 May 1875.
Read 22 " "

E.13. No: 517

Note on Estimates
Submitted by the Dt.
Engr., N. Arcot, for
certain irrigation
works in the Wallajah
Taluq.

E.C. No: 1470. 26-5-75.

No 571

Public Dr. Dept.

Proceedings of the Madras Government

Read the following.

Note by the Chief Engineer for Irrigation. No: 517 dated 13th May 1875.

G.O. No: 1470 of 24th May. The following estimates for tanks in the Wallajah Range of the North Arcot District are sanctioned.

Repairs.

1.	Valetharayyapooram Tank	Rs	1,220
2.	Chiengleruttiam	Do	715
3.	Cadamburuttiangle	Do	460
4.	Poondy Lamedrum	Do	214
5.	Vellapooram	Do	1950
6.	Panapoo Ram	Do	820
7.	Thappoor	Do	2130
8.	Jumbos-colum	Do	810
9.	Soorayanpett	Do	625
10.	Thangavelapuram tank	Do	650
11.	Cavaripaccapuram tank		560

Minor

Memos New Irrs Rs-

1. Valathangiyooram tanks - Rupees 115
5 Vallapuram do " 1900
6 Panapatturai do " 475
7 Thappoor do " 1750
8 Jumbocolum do " 650

2- The remarks of the Chief Engineer for Irrigation on some of the estimates will receive the District Engineers attention, and especially the concluding remarks.

Mg. 15/5/75

No 571-572

The D.C. North Asst
" Asst P.W.D/C
" Chf Engr for Irrs with 13 Enclosures.

SC dispd - 12-6-75

3394

Govt. of {1875} Madras.

PUBLIC WORKS.

To The Secretary.

Dated

Recd. 14-10

G. O. 26 June 1875, No. 1429

Nos. 571-572

Tanks in the Wallajah Range of the North Arcot District.— The estimates amounting to Rs: 14.944. for repairs to the ——— sanctioned with remarks.