

(1) Number of pages _____

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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 456 (W) Press
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Dated 9-2-1877.

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12

*Proceedings of the Madras Government, Public Works Department,
9th February 1877. No. 456.*

Read the following:—

No. 89 W.

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

THE following estimates from the Poloor Range are forwarded by the District Engineer, North Arcot, with his letter No. 1,761, dated 31st August 1876. marginally noted:—

Taluq.	Village.	Work.	Amount.
Wandewash	Theroomboondy	V. large and Conantangle tanks	RS. 1,700
Do.	Poorooasay	V. Cullary tank	980
Do.	Peroongadapoothoor	V. tank	915
Do.	Ragoonathasamoodram	V. large tank	1,480
Do.	Namily	V. tank	485
Total ..			5,560

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 five years.	Highest Revenue for five years.	OUTLAY.			
					During the previous four years.	PROPOSED ORDINARY AGRICULTURAL, IRRIGATION.		
						Original Works.	Repairs.	Average annual proportion of Charges to Revenue.
	ACRES.	RS.	RS.	RS. Not stated.	RS.	RS.	RS.	PER CENT. RS.
Theroomboondy large and Conantangle tanks	78	474	531	..	Nil.	413	1,287	64.0
Poorooasay Cullary tank	66	420	413	..	..	155	825	47.4
Peroongadapoothoor tank	44	181	168	..	..	425	490	108.9
Ragoonathasamoodram large tank	126	647	827	..	..	210	1,270	35.7
Namily tank	36	192	208	..	158	115	370	61.8
Total ..	350	1,914	2,147	Not stated.	158	1,318	4,242	53.2

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.		
Theroomboondy large tank ..	SQ. M. 5	C. FT. 354	C. FT. 75	FT. E 20 E 48	FT. 20 48	FT. 3.27 4.50	FT. 1.27 2.50	C. FT. 156.7 376.2	No. Nil.
Do. Conantangle tank ..	5	354	50	E 40 E 48	40 48	3.26 4.50	1.26 2.50	313.5 376.2	..
Poorooasay Cullary tank ..	5	354	50	E 24 E 42	24 42	2.40 4.50	0.40 2.50	188.1 329.1	..
Peroongadapoothoor tank ..	1.5	737	..	E 60 E 80	60 80	2.34 4.50	0.34 2.50	470.2 627.0	..
Ragoonathasamoodram large tank.	1	562	..	E 50 E 25+35	50 60	2.65 4.50	0.65 2.50	391.9 470.2	..
Namily tank	1	562	70	F 24 E 60	24 60	2.30 4.50	0.30 2.50	188.1 470.2	..

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. V.—Village.

*Proceedings of the Madras Government, Public Works Department,
9th February 1877. No. 456.*

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

Theroomboondy large Tank and Theroomboondy Conantangle Tank.—These two tanks irrigate and belong to one ayacut area. The provision made in the former is for raising and repairing the bund, repacking the old stone revetment, and raising it where needed with new stone to a uniform height for the protection of the bund, also for reconstructing an Irrigation sluice and for constructing a dry stone escape. The provision made in the estimate for the latter tank is for raising and repairing the bund, turfing, repairing the Irrigation sluice, and constructing a dry stone escape.

Pooroosay Cullary Tank.—Raising and repairing the bund, turfing, reconstructing the Irrigation sluice, and extending the dry stone escape.

Peroongadapoothoor Tank.—Raising, repairing and turfing the bund, replacing the damaged pot sluice by a masonry Irrigation sluice, and constructing a dry stone escape.

Ragoonathasamoodram large Tank.—Raising, repairing and turfing the bund, rebuilding the rough stone revetment, clearing brushwood, reconstructing an Irrigation sluice, and constructing two dry stone escapes.

Namily Tank.—Raising, repairing, and turfing the bund, and constructing a dry stone escape.

4. The head walls of the Theroomboondy large tank and the Pooroosay Cullary tank irrigation sluices should be carried up to full tank level, and a pole should be attached to the plug and should work through guide stones.

The depth of water above the plug-hole is in both cases sufficiently great to render this appliance necessary.

5. The discharge through the plug holes with the smallest head of water at which it is intended to work them without the aid of the lower vent, and the discharge of the lower vent with the water at its lowest working level should always be given on the plans of irrigation sluices as well as the acreage to be supplied. The last only is entered on the plans under review.

6. Plans and sections of the proposed escapes should have accompanied the estimates, and the nature of the soil in each case should have been stated.

7. The treatment of tanks collectively by groups naturally connected has often been indicated as embodying an important principle, which is to be constantly kept in view. The connection of these tanks with others is not adverted to; at the same time it is not positively stated that they are isolated.

8. The necessity for the execution of the work in each case is made out for the tanks individually, but it is not known whether there are tanks above or below which affect or are affected by the condition of those estimated for. It is time that in North Arcot the renovation and improvement of this class of Irrigation works should be carried out on more comprehensive principles. It is not necessary to delay the execution of the necessary repairs in order that more complete information may be supplied; but it is very desirable that estimates in course of preparation throughout the district should be framed so as to include at once all that is necessary for the groups of which individual members have been inspected.

*Proceedings of the Madras Government, Public Works Department,
9th February 1877. No. 456.*

9. There are very remarkable discrepancies in the area of irrigation (actual) per square mile of drainage. Taking the acreage actual to be in direct proportion to the average revenue, these come to, for—

No. 1	...	87	acres to the square mile,
" 2	...	129	do. do.,
" 3	...	27	do. do.,
" 4	...	155	do. do.,
" 5	...	39	do. do.,

and these results tend to discredit the correctness of the areas of the catchment basins. At any rate the District Engineer should have specially explained to what circumstances such great differences are due. It is a very important part of the duties of a District Engineer to look into such matters and to satisfy himself of the correctness and suitability of arrangements proposed for the reformation of Irrigation works, and of course the data on which proposals may be based should be approximately correct or they will be only misleading.

10. 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.	
Theroomboondy large tank	Repairing the bund	RS. 208	RS. 430	1,700
	New stone revetment to bund	...	...	
	Reconstructing an Irrigation sluice	...	337	
	Dry stone escape	115	...	
Theroomboondy Conantangle tank	Repairing the bund and Irrigation sluice	...	520	980
	Dry stone escape	90	...	
Pooroosay Cullary tank	Repairing the bund	...	515	915
	Reconstructing an Irrigation sluice	...	310	
	Extending the dry stone escape	155	...	
Peroongadapoothoor tank	Repairing the bund	...	490	1,480
	Replacing the damaged pot-sluice by a masonry Irrigation sluice	270	...	
	Dry stone escape	155	...	
Ragoonathasamoodram large tank	Repairing the bund	...	750	485
	Rebuilding an Irrigation sluice	...	520	
	Two dry stone escapes	210	...	
Namily tank	Repairing the bund	...	370	...
	Dry stone escape	115	...	

(Signed) A. DEC. SCOTT, Major, R.E.,
Dy. Chief Engr. for Irrigation,
for Chief Engr. for Irrigation.
FORT ST. GEORGE,
30th January 1877.
To the Secretary to Government, Public Works Department.

No. 271. ORDER THEREON, 9th February 1877, No. 456.

ACCOUNT.

Irrigation, No. 30.

No. 89 W, dated 30th January 1877.

The following estimates for Irrigation works in the Poloor Range, North Arcot District, forwarded by the Chief Engineer for Irrigation with his memorandum marginally noted are sanctioned, subject to such revision as may be necessary with reference to the foregoing remarks of the Chief Engineer for Irrigation.

Proceedings of the Madras Government, Public Works Department,
9th February 1877. No. 456.

Irrigation.

Name of Tank.	Provision of Estimate.	Fund, Ordinary Agricultural, Irrigation.	Amount.	Irrigation Register No.
Theroomboondy large tank.	1 Repairing the bund	Repairs	Rs. 430	1
	2 New stone revetment to the bund.	Original Works ..	208	2
	3 Reconstructing an Irrigation sluice.	Repairs	337	3
Do. Conantangle tank ..	4 Dry stone escape	Original Works ..	115	4
	1 Repairing the bund and Irrigation sluice	Repairs	520	1
	2 Dry stone escape	Original Works ..	90	2
Poroosay Cullary tank ..	1 Repairing the bund	Repairs	515	1
	2 Reconstructing an Irrigation sluice.	Do.	310	2
	3 Extending the dry stone escape.	Original Works ..	155	3
Poroongadapoothoor tank ..	1 Repairing the bund	Repairs	490	1
	2 Replacing the damaged pot-sluice by a masonry Irrigation sluice.	Original Works ..	270	2
	3 Dry stone escape	Do.	155	3
Ragoonathasamoodram tank	1 Repairing the bund	Repairs	750	1
	2 Rebuilding an Irrigation sluice.	Do.	520	2
	3 Two dry stone escapes ..	Original Works ..	210	3
Namily tank	1 Repairing the bund	Repairs	370	1
	2 Dry stone escape	Original Works ..	115	2

2. These sanctions are registered as shown above.

(True Extract.)

Lieut.-Colonel, R.E.,
Secretary to Government.

To the District Engineer, North Arcot.
" Collector of do.
" 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,

Int. Office. 30 Jan'y 1877.

No. 89. W.

Note by the Chief Engineer for Irrigation.

No. 1761

Dated 31 Aug 1877.

Encls. 32

The following Estimates from the Poloor Range are forwarded by the District Engineer North Arcot with his letter marginally noted:—

Taluq. Village. Work. Amount.

Wandiwash-Theroomboondy - V. large & Conantangle Tanks - 1700
do Poroosay - V. Cullary Tank - 980
do Poroongadapoothoor - V. Tank - 915.
do Ragoonathasamoodram - V. large tank - 1480.
do Namily - V. Tank - 485
Total Rs. 5560

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 Repairs.	Proposed Repairs.	Average annual proportion of Charges to Revenue.
	Acres.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Theroomboondy large tank	78	476	531	Not stated	Nil	413	1287	64.0.
Conantangle Tanks	66	420	413	"	"	155	825	47.4
Poroosay Cullary Tank	44	181	168	"	"	125	490	108.9
Poroongadapoothoor Tank	126	647	827	"	"	210	1274	55.7
Ragoonathasamoodram large tank	36	192	208	"	158	115	370	61.8
Namily Tank	350	1716	2147	Not stated	158	1318	4242	53.2

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.		
Sq. M.	C. ft.	C. ft.	Ft.	Ft.	Ft.	Ft.	C. ft.	No.	
Theroombondy large Tank.	5 354	75	E. 20	20	8.87	3.27	158.7	Nil	
do - Conantank Tank.	5 354	50	E. 40	40	4.8	1.50	370.2	"	
Pooroday fullary Tank.	5 354	50	E. 24	24	2.40	0.40	188.1	"	
Peroongada prothoor Tank.	15 737	"	E. 60	60	2.34	0.34	470.2	"	
Ragoonathasamoodram large Tank.	1 562	"	E. 50	50	2.65	0.65	591.9	"	
Nannily Tank.	1 562	70	E. 24	24	2.50	0.50	188.1	"	

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. V.—Village.

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

Theroombondy large Tank & Theroombondy Conantank Tank—These two tanks irrigate and belong to one Agent area. The provision made in the former is for raising and repairing the bund, repacking the old stone revetment and raising it where needed with new stone to a uniform height for the protection of the bund, also for reconstructing an irrigation sluice and for constructing a dry stone escape.

Note for Serials—Red entries in this report are to be printed in red ink. Blue entries in this report are to be printed in blue ink.

The provision made in the Estimate for the latter tank is for raising and repairing the bund, turfing, repairing the irrigation sluice & constructing a dry stone escape.

Pooroday fullary Tank—Raising and repairing the bund, turfing, reconstructing the irrigation sluice and extending the dry stone escape.

Peroongada poothoor Tank—Raising, repairing and turfing the bund, replacing the damaged pot sluice by a masonry irrigation sluice and constructing a dry stone escape.

Ragoonathasamoodram large Tank—Raising, repairing and turfing the bund, rebuilding the rough stone revetment, clearing brushwood, reconstructing an irrigation sluice and constructing two dry stone escapes.

Namilly Tank—Raising, repairing and turfing the bund & constructing a

a dry stone Escape -

4. The head walls of the Sherombong large ^{bank} and the Porrooy fullary Sank Irrigation sluices should be carried up to full Sank level and a pole should be attached to the Plug and should work through guide stones.

The depth of water above the plug hole is in both cases sufficiently great to render this appliance necessary.

5. The discharge through the plug holes with the smallest head of water at which it is intended to work them without the aid of the lower Vent, and the discharge of the lower Vent with the water at its lowest working level should always be given on the Plans of Irrigation Sluices as well as the acreage to be supplied. The last only is entered on the Plans under review.

6. Plans and Sections of the proposed Escapes should have accompanied the Estimates and the nature of the soil in each case should have

50
been stated.

7. The treatment of tanks collectively by groups naturally connected, has often been indicated as embodying an important principle which is to be constantly kept in view. The connection of these tanks with others is not advised to at the same time it is not positively stated that they are isolated.

8. The necessity for the execution of the work in each case is made out for the tanks individually but it is not known whether there are tanks above or below which affect or are affected by the condition of those estimated for. It is true that in North Acre the renovations and improvement of this class of irrigation works should be carried out on more comprehensive principles. It is not necessary to delay the execution of the necessary repairs in order that more complete information may be supplied but it is very desirable that estimates in course of preparation

throughout

throughout the District should be framed so as to include at once all that is necessary for the group of which individual members have been inspected.

9. There are very remarkable discrepancies in the area of irrigation (actual) per square mile of drainage. Taking the average actual to be indirect proportion to the average revenue there comes to be:

N. 1.	87 acres to the square mile
2.	129 do do
3.	27 do do
4.	155 do do
5.	39 do do

and these results tend to discredit the correctness of the areas of the catchment basins. At any rate the District Engineer should have specially explained to what circumstances such great differences are due. It is a very important part of the duties of a District Engineer to look into such matters and to satisfy himself of the correctness & suitability

of arrangements proposed for the reformation of irrigation works and of course the data on which proposals may be based should be approximately correct or they will be only misleading.

10. 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 original works		Total for each tank
		original	works	
Therombarney Large Tank	Repairing the bund	.	230	1700
	New stone revetment to do	208	.	
	Reconstructing an Irrigation sluice	.	337	
	Dry stone Escape	115	.	
do - (ourantam) Small	Repairing the bund and Irrigation sluices	.	520	980
	Dry stone Escape	90	.	
	Repairing the bund	.	575	
Porroneay (fullam) Small	Reconstructing an Irrigation sluice	.	310	915
	Extending the dry stone Escape	155	.	
	Repairing the bund	.	490	
Porroneay (fullam) Small	Replacing the damaged pot sluice by a masonry	370	.	915
	Irrigation sluice	.	.	
	Dry stone Escape	155	.	

Regionalthasamudra Large Tank	Repairing the bund	450	
	Rebuilding and briga- tion sluices	520	1480
	Two dry stone Escapes	210	
Namely Tank	Repairing the bund	370	
	Dry stone Escape	115	485

Ans. Scott

Major R. R.

Deputy Chief Engineer for Irrigation

Chief Engineer for Irrigation

To

The Secretary to Government
Public Works Dept.

CSL

mk

1877

from
The Chief Engineer for Irrig.

P.W.D.

7 FEB 77

No. 1313

Dated 30th January 1877
Recd. 7th February 1877.

Encls. 32

N^o 89-W.

Tank Repairs - North Arcot
District. - Note forwarding for
Sanction - estimates for certain

N^o 270

E. I. Form No. 3.

Recd
governor
Proc of the Madras Govt.
Under date the
Read the following
The Chief Eng. for Irrig. (N^o 89 W d/30th Jan'y 1877)
The following Estimates for Irrigation
Works in the Poloor Range,
North Arcot District, forwarded by
the Chief Engineer for Irrigation with his
No. 89 W. dated 30th Jan'y 1877.

Memorandum marginally noted are sanctioned.
Subject to such revision as may be necessary
with reference to the foregoing remarks
Irrigation of the Chief Engineer for Irrigation

Name of Tank.	Provision of Estimate.	Fund. Ordinary Irrigation	Amount	Irrigation Register No.
Theroombondy Large tank	1 Repairing the bund	Repairs	430	1
	2 New stone revet- ment to the bund	original works	208	2
	3 Reconstructing an irrigation sluice	Repairs	337	3
	4 Dry stone escape	original works	115	4
do - Amantank Tank	1 Repairing the bund and irrigation sluice	Repairs	520	1
	2 Dry stone escape	original works	90	2
Pomroy fullary Tank	1 Repairing the bund	Repairs	515	1
	2 Reconstructing an irrigation sluice	Repairs	310	2
	3 Entrenching the dry stone escape	original works	155	3
Peringadaputhi Tank	1 Repairing the bund	Repairs	490	1
	2 Replacing the damaged pot sluice by a masonry irriga- tion sluice	original works	270	2
	3 Dry stone escape	do	155	3
	Repairing			

Ragunathasamudram Tank -	1	Repairing the bund	Repairs -	750	1	374	T
	2	Rebuilding an irrigation sluice	do	520	2		
	3	Two dry stone Escapes	original works	210	3		
Nanniy Tank.	1	Repairing the bund	Repairs -	370	1	315	I
	2	Dry stone Escape	original works	115	2		

2. These sanctions are registered as shown above -

Aug 1
62

Govt of 1877 Madras.
PUBLIC WORKS.

To *The D. C. North Arcot*

Dated

Issued

Recd.

Encl.

G. O. of *9th Feb* 1877, No. *456*

Nos. *270-71*

But no Ref

Lanka, North Arcot Dt
The estimates aggregating
Rs 5360 for repairs to
Certain —, sanctioned